

KINGSBOROUGH COMMUNITY COLLEGE
The City University of New York

CURRICULUM TRANSMITTAL COVER PAGE

Department: Health, Physical Education and Recreation Date: 3/11/20

Title Of Course/Degree/Concentration/Certificate: EXS 2000

Change(s) Initiated: (Please check)

- | | |
|---|---|
| <input type="checkbox"/> Closing of Degree | <input type="checkbox"/> Change in Degree or Certificate |
| <input type="checkbox"/> Closing of Certificate | <input type="checkbox"/> Change in Degree: Adding Concentration |
| <input type="checkbox"/> New Certificate Proposal | <input type="checkbox"/> Change in Degree: Deleting Concentration |
| <input type="checkbox"/> New Degree Proposal | <input type="checkbox"/> Change in Prerequisite, Corequisite, and/or Pre/Co-requisite |
| <input checked="" type="checkbox"/> New Course | <input type="checkbox"/> Change in Course Designation |
| <input type="checkbox"/> New 82 Course (Pilot Course) | <input type="checkbox"/> Change in Course Description |
| <input type="checkbox"/> Deletion of Course(s) | <input type="checkbox"/> Change in Course Title, Number, Credits and/or Hours |
| | <input type="checkbox"/> Change in Academic Policy |
| | <input type="checkbox"/> Pathways Submission: |
| | <input type="checkbox"/> Life and Physical Science |
| | <input type="checkbox"/> Math and Quantitative Reasoning |
| | <input type="checkbox"/> A. World Cultures and Global Issues |
| | <input type="checkbox"/> B. U.S. Experience in its Diversity |
| | <input type="checkbox"/> C. Creative Expression |
| | <input type="checkbox"/> D. Individual and Society |
| | <input type="checkbox"/> E. Scientific World |
- Change in Program Learning Outcomes
- Other (please describe): _____

PLEASE ATTACH MATERIAL TO ILLUSTRATE AND EXPLAIN ALL CHANGES

DEPARTMENTAL ACTION

Action by Department and/or Departmental Committee, if required:

Date Approved: 3/5/20 Signature, Committee Chairperson: MaBracco

If submitted Curriculum Action affects another Department, signature of the affected Department(s) is required:

Date Approved: 3/5/20 Signature, Department Chairperson: Donald Heine

Date Approved: 3/5/20 Signature, Department Chairperson: Donald Heine

I have reviewed the attached material/proposal

Signature, Department Chairperson: _____

**Kingsborough Community College
The City University of New York
Undergraduate Curriculum
FORMAT FOR PRESENTATION OF CURRICULUM PROPOSALS**

1. DEPARTMENT, COURSE NUMBER AND TITLE:

Department of Health, Physical Education and Recreation

Course Number: EXS 2000

Title of the course: Exercise, Energy Balance, and Weight Management

2. DOES THIS COURSE MEET DISTRIBUTION REQUIREMENTS FOR GROUPS I-V? IF SO, WHICH GROUP?

This course does not meet distribution requirements for Groups I-V nor pathways A-E.

3. TRANSFERABILITY OF THIS COURSE. DESCRIBE HOW THIS COURSE TRANSFERS (required for A.S. degree course). If A.A.S. degree course and does not transfer, justify role of course, i.e., describe other learning objectives met:

This course will transfer as a degree requirement or elective to other schools.

4. BULLETIN DESCRIPTION OF COURSE:

Concepts and principles of energy balance, body composition, weight management, and physical activity as they relate to personal health. Examines the causes of obesity, its impact on human health and explores weight loss and diet options for the individual from a holistic perspective. Using case studies, students will complete a lifestyle analysis, develop nutritionally sound dietary plans, and design specialized exercise programs tailored to address an individual's personalized weight management goals.

5. NUMBER OF WEEKLY CLASS HOURS (please indicate the number of hours per week spent in a lab, hours spent on site doing fieldwork, hours of supervision and hours in classroom- if applicable):

3 Hours Lecture

6. NUMBER OF CREDITS:

This course is 3 credits

7. COURSE PREREQUISITES AND COREQUISITES

Prerequisites: HE 4200, HPE 12, EXS 1300, and EXS 1500

Corequisites: None

Pre/Co-requisite: None

8. BRIEF RATIONALE TO JUSTIFY PROPOSED COURSE TO INCLUDE:

- | | |
|---|---------------------------|
| A. Enrollment summaries, if previously offered as an 82 | No |
| B. Projected enrollment | 80 students annually |
| C. Class limits | 20 |
| D. Frequency course is likely to be offered | 1-2 sections per semester |
| E. Role of course in department's curriculum and college's mission: | |

This course will be a degree requirement for Exercise Science majors. Currently Exercise Science students are required to take a 2-credit Weight Management (HE 50) course. However, the current 2-credit course is insufficient in preparing Exercise Science majors for study at the four-year college level, as well as working in careers such as personal trainer, physical educator, athletic trainer, physical therapist, and many others. Fifty percent of the 2-credit course is devoted to physical activity that is not needed for our majors since we already include a very large portion of the curriculum to hands on physical activity courses (EXS 1500 (3 credits), and 5 PEC courses).

Adding an additional 12 hours of academic material while decreasing the activity portion of the three credit course will allow students to become more prepared to be successful in their undergraduate work as well as to help working with future clients and/or patients with body weight issues. In addition, increasing the course from two to three credits will allow for better transfer to four-year schools.

9. LIST OF COURSES, IF ANY, TO BE WITHDRAWN WHEN COURSE(S) IS (ARE) ADOPTED:

Course HE 5000 (Weight Management) will be withdrawn from the requirement for Exercise Science majors, however the course will still be available for the general student body.

10. IF COURSE IS AN INTERNSHIP OR INDEPENDENT STUDY OR THE LIKE, PROVIDE AN EXPLANATION AS TO HOW THE STUDENTS WILL EARN THE CREDITS AWARDED. THE CREDITS AWARDED SHOULD BE CONSISTENT WITH STUDENTS' EFFORTS REQUIRED IN A TRADITIONAL CLASSROOM SETTING:

N/A

11. PROPOSED TEXT BOOK(S) AND/OR OTHER REQUIRED INSTRUCTIONAL MATERIAL(S):

The required textbook will consist of three previously used textbooks that were required for three other courses required for the degree program. These textbooks have relevant chapters that provide information on energy balance, and weight management that were not previously discussed in much detail in the previous courses.

- Nutrition for Living, Author: Schiff, Publisher: MCG, Edition: 5TH (required for HE 4200)
- Health: Basics, Author: Donatelle, Publisher: Pearson, Edition: 13th (required for HPE 1200)
- ACSM's Guidelines for Exercise Testing and Prescription; Publisher: Wolters Kluwer, Edition: 13th (required for EXS 1300)
- In addition, selected OER readings and resources will be provided by the instructor

12. REQUIRED COURSE FOR MAJORS AND/OR AREA OF CONCENTRATION? (If course is required, please submit a separate transmittal with a degree requirement sheet nothing the proposed revisions, including where course fits into degree requirements, and what courses(s) will be removed as a requirement for the degree. NYSED guidelines of 45 credits. Of Liberal Arts coursework for an A.A. degree, 30credits. For an A.S. degree and 20 credits. Of Liberal Arts for A.A.S. degree must be adhered to for all 60 cr. Programs).

The course will be a requirement for the A.S. degree in Exercise Science. Course HE 5000 (Weight Management) will be removed from the degree requirement (see submitted degree changes).

13. IF OPEN ONLY TO SELECTED STUDENTS (specify):

Open to students, who meet the requirements of HE 4200, or BIO 70; HPE 12, EXS 1300, and EXS 1500

14. EXPLAIN WHAT STUDENTS WILL KNOW AND BE ABLE TO DO UPON COMPLETION OF COURSE:

At the conclusion of the course, students will be able to:

- A. Explain what energy balance is, and what determines an individual's daily energy needs.
- B. Describe the effects of an energy imbalance.
- C. Explain the concept of a healthy weight, and differentiate between the conditions of underweight, overweight, and obesity.
- D. Define healthy weight and identify how to determine if you are at a healthy weight.
- E. Describe and explain the role of cultural, psychosocial, physiological, nutritional, and economic factors in weight management.
- F. Identify the impact of the U.S. Food system and its role in creating obesogenic environments.
- G. Explain obesity trends over time and identify its impact on the creation of the weight loss industry and the rise of eating disorders, body shaming, and positive and negative body images.
- H. Identify the connection between body composition and sedentary lifestyles with disease outcomes such as cardiovascular disease, diabetes, cancer, and musculoskeletal disorders through critical analysis of peer reviewed scientific journal articles.
- I. Explain the role macro and micronutrients play in weight management.
- J. Calculate individualized basal metabolic rates and energy balance equation by utilizing formulas and online calculation tools to identify individual caloric needs based on age, gender, and activity level.
- K. Utilize the USDA dietary guidelines, portion control, moderation concepts, and individual caloric needs based on energy balance to create a foundation for future meal planning.
- L. Describe and conduct individualized assessments of body weight and composition such as body mass index (BMI), body fat % utilizing scales and hand held devices, girth measurements and identify benefits and limitations of these methods.
- M. Identify and analyze current trends and fads in the weight loss industry such as vegan, ketogenic, paleo, gluten free, intermittent fasting, supplementation, super foods, etc. and evaluate the benefits, limitations and potential dangers for long-term weight management.
- N. Identify electronic resources for students to track and monitor their food intake and physical activity and the benefits and limitations for weight management.
- O. Explain the role of behavior modification by identifying common stress inducing triggers related to family, work, scheduling, etc. and creating time and stress management action plans.
- P. Describe the benefits of cardiovascular activity as it relates to body composition and cardiovascular health; design a safe cardiovascular program by identifying FITT principles and appropriate heart rate range.
- Q. Design a full body resistance-training program utilizing various modalities including free weights, machines, body-weight, and stretch bands that is sustainable, based on progressive overload principle, and is in line with the students' weight management goals.

- R. Create a comprehensive physical activity weekly schedule that includes strength training, cardiovascular activity, and stretching that is sustainable, fun, and works with an individual's lifestyle.
- S. Describe the impact of pregnancy, aging, injury, illness, and disability on weight management and identify ways to manage life stages for long-term weight management.
- T. Locate and identify free and low cost resources in the community such as school fitness facilities, community centers, city parks, and fitness clubs that students can utilize as part of long-term weight management plans.
- U. Define disordered eating and discuss the warning signs of and treatment options for eating disorders.

15 METHODS OF TEACHING –e.g., LECTURES, LABORATORIES, AND OTHER ASSIGNMENTS FOR STUDENTS, INCLUDING ANY OF THE FOLLOWING: DEMONSTRATIONS, GROUP WORK, WEBSITE OR E-MAIL INTERACTIONS AND/OR ASSIGNMENTS, PRACTICE IN APPLICATION OF SKILLS:

- A. Teaching is accomplished through lectures (see topical Outline), class discussions, written assignments, and use of online sources.

16. ASSIGNMENTS TO STUDENTS:

Students will be required to submit (5) written assignments. These will be in either class assignments or Blackboard assignments based on article readings. In class, assignments will be related to aerobic fitness assessments, understanding and assessing Body Mass Index (BMI), body composition and analyzing body fat%, as well as other commonly used weight management assessment tools. Online assignments will focus on understanding changes in the United States Food system and its impact on Public Health and creation of obesogenic environments, and motivation, time management and stress management as they relate to weight management.

In addition to the written assignments discussed above, students will also have a final written project to complete. The final written project will consist of an individual case study. Students will use their cumulative knowledge acquired during the semester to create a customized recommendation plan for an individual client with a variety of needs (weight loss, diabetes, CVD, etc.). Recommendations should include information that is within the scope of practice for a fitness professional. This will include calculating BMI, calculating suggested daily calorie intake, calculating dietary macro needs, as well as providing a sample dietary meal plan from an official source. For example, an individual with CVD may need dietary recommendations and meal plans provided from organizations such as the American Heart Association, the Mayo Clinic, NIH, etc. Specific recommendations for a condition should be researched using peer reviewed journals. Information on specific dietary needs should not come from social media, magazines, general health websites or any other non-research or non-academic sources. Students will also provide an individualized exercise plan, using ACSM recommendations, tailored to the individual's goals. Plan will include recommendations for cardiovascular, muscular (including all joint actions) and flexibility improvement and be

appropriate for the assigned individual. More details regarding this assignment will be provided via Blackboard.

17. DESCRIBE METHOD OF EVALUATING LEARNING SPECIFIED IN #15:

Written Assignments (5)	25%
Final Project	25%
Blackboard Quizzes (2)	20%
Final Written Exam	20%
Class attendance and Participation	10%

18. TOPICAL COURSE OUTLINE (WHICH SHOULD BE AS SPECIFIC AS POSSIBLE REGARDING TOPICS COVERED, LEARNING ACTIVITIES AND ASSIGNMENTS):

EXS 2000 Exercise, Energy Balance, and Weight Management Course Schedule				* Course Schedule is subject to change
Wk	Day	Topic for Discussion	Assignments Due	
1	TBD	Lecture 1: Examine the need for energy balance and weight management. Introduction to U.S. Food System and its role in creating obesogenic environment.	Please refer to Blackboard for assignment details	
		Lecture 2: Obesity trends and the development of the Weight Loss Industry (historical perspective to modern developments) and the rise of eating disorders and the health food industry.		
		Review research connecting obesity and sedentary lifestyles to chronic diseases such as cardiovascular disease, diabetes, cancer, and musculoskeletal disorders.		
2	TBD	Lecture 3: Examine the connection between body composition, obesity, and disease outcomes.	Assignment #1	
		Lecture 4: Energy balance and the components of energy expenditure. Review online sources for estimating energy expenditure.		
3	TBD	Lecture 5: Setting Calorie Targets.	Assignment #2	
		Lecture 6: The role of fitness, positive body composition, and diet in prevention and reversal of disease. Calculate basal metabolic rates using variables such as age, gender, physical activity level, etc.		
4	TBD	Lecture 7: The role of macro and micronutrients and their role in weight management.		
		Lecture 8: Examine how the hormones ghrelin, peptide YY, leptin, insulin, and adiponectin affect hunger and satiety. Methods used in assessing disease risk, body weight, and body composition.		
5	TBD	Lecture 9: Non-Exercise Activity Thermogenesis (NEAT). Impacts of Endurance Exercise and Interval Training on Energy Expenditure Fat Loss.	Assignment #3	
		Lecture 10: Impacts of Resistance Exercise on Energy Expenditure and Fat Loss. Impacts of Exercise on Abdominal Fat & FFM Retention. Impact of Exercise on Appetite. Impacts of Fasted vs Fed Exercise on Energy Expenditure and Fat Loss.		
		Measurement of body composition using skinfolds.		

6	TBD	Lecture 11:	Variables and components for designing a well-rounded exercise program for weight management.	
		Lecture 12:	Variables and components for designing a well-rounded exercise program for weight management - continued	
			Measurement of body composition using skinfolds.	
7	TBD	Lecture 13:	Introduction to final written project.	Assignment #4
		Lecture 14:	Examine dietary guidelines, USDA Food pyramids (and alternatives), and MyPlate.gov.	
			Identifying appropriate evidence based online resources regarding dietary guidelines, food pyramids, and MyPlate.	
8	TBD	Lecture 15:	Identify popular terms, diet trends and fads (ketogenic, paleo, plant based diets, gluten free, intermittent fasting, organic, non-gmo, etc.), and critically analyze the value of such diets for health and long term weight management based on scientific research.	
		Lecture 16:	Continued discussion on the previous lecture topics.	
			Identify the processes of human digestion, absorption, and metabolism	
9	TBD	Lecture 17:	Developing a sustainable nutritional plan.	Assignment #5
		Lecture 18:	Meal planning for weight management.	
			Using online resources for developing a meal plan.	
10	TBD	Lecture 19:	Stress and time management techniques essential to a weight management program. Schedule planning, journaling and behavioral considerations.	
		Lecture 20:	Psychology of Obesity - Strategies for adherence and successful weight loss/maintenance.	
			Stress management techniques in practice, intuitive eating and mindful eating activities.	
11	TBD	Lecture 21:	Current treatments used in obesity; Review OTC and prescription drugs and their effectiveness.	Term Project Due
		Lecture 22:	Define disordered eating, and discuss the warning signs of, and treatment options for eating disorders.	
			Ted Talk, Disordered eating screening tools, national and local disordered eating resources.	
12	TBD	Lecture 23:	Locating fitness resources in community and ways students can best utilize free and low cost options to continue weight management program at home or in the community	Return Term Project
		Lecture 24:	Work in groups to share completed programs. Course wrap up.	
			Exploring additional online evidence-based program resources.	

19. SELECTED BIBLIOGRAPHY AND SOURCE MATERIALS:

1. *Healthy Eating Every day*: Ruth Ann Carpenter, Carrie E. Finley, Human Kinetics, 2nd edition, 2017
2. *Health: Basics*, Author: Donatelle, Publisher: Pearson, Edition: 13th
3. *OER: Lifetime Fitness and Wellness* - <https://courses.lumenlearning.com/fitness/>