

**UNIVERSITY OF MASSACHUSETTS BOSTON  
COLLEGE OF NURSING AND HEALTH SCIENCES  
DEPARTMENT OF EXERCISE AND HEALTH SCIENCES  
COURSE SYLLABUS**

**Course Number:** EHS 420

**Course Title:** Pediatric Exercise

**Course Credit:** 3 credits

**Prerequisites:** EHS 380 Exercise Physiology I (or by permission of instructor)

**Course Instructor:**

Sarah Camhi, PhD

Assistant Professor

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**Office: Room: 301-08**

**Office Hours: Tuesday/Thursday 1-2pm, or by appointment**

**Required Course Material:**

Articles, readings and lecture notes will be posted on Blackboard. It is the student's responsibility to print out materials, read articles and readings **BEFORE** class, and come to class prepared.

***Recommended Textbooks:***

Malina, R, Bouchard, C., Bar-Or, O. Growth, Maturation, and Physical Activity-2nd Edition. 2<sup>nd</sup> Edition, 2004. ISBN-13: 9780880118828

Rowland, TW. Children's Exercise Physiology, 2<sup>nd</sup> Edition, Champaign, IL. Human Kinetics. 2005. ISBN 0736051449

**Course Description**

This course focuses on exercise and physical activity in children and adolescents. This course introduces students to the anatomical, physiological and psychosocial issues related to exercise and physical activity in children such as effects of maturation, growth and puberty on the fitness components (body composition, cardiorespiratory endurance, muscle strength, muscle endurance and flexibility), normal responses to exercise, and adaptations of exercise training. Students will also explore clinical pediatric health issues (asthma, diabetes, congenital heart disease, obesity, etc), including a clinical condition of their choosing, and how to adapt appropriate and safe physical activity and exercise programs. A special emphasis will also be on public health policies and national recommendations for children and adolescents including physical activity, physical education, nutritional intake, sedentary behaviors, etc.

### Course Objectives

1. Understand the child/adolescent's physiological response to exercise and training in the context of growth and maturation and design and develop maturity-appropriate exercise training programs and materials.
2. Observe and team-teach physical education classes and activities, or create educational materials on fitness and wellness that are tailored and age-appropriate.
3. Understand expert recommendations and policies related to pediatric exercise, physical activity and nutrition.
4. Understand the public health implications of physical activity in children/adolescents with respect to obesity, diabetes and other clinically relevant conditions with respect to treatment and health promotion.

### Teaching Strategies:

Lectures, classroom discussions, short assignments, hands-on experiences in a community setting, writing, projects and student presentations.

### Grading

#### 10% Attendance & Participation

Students are required to attend class and arrive on time. Regular attendance and arriving for the start of class promptly at the start is essential for a full understanding of the concepts presented. Attendance will be taken at the beginning of each class meeting. Absences will be excused only for emergency situations, such as illness (with a doctor's note) or for a death in the family.

Students are expected to participate during each class by asking questions or making comments. Occasionally throughout the semester, short assignments relating to class material will be given to emphasize and synthesize lecture material which may involve writing a short response, preparing/presenting a short summary of an article. It is expected that students engage in these activities as appropriate.

#### 40% Exams (4 total; 10% each)

The exams will test the student's knowledge of the material presented in lectures and required readings. The reference readings are provided for additional information on concepts presented in lecture, and are resources for clarifying these concepts, but will not be the focus of the exam. There are no make-ups for exams unless the absence is excused, however, students must contact the professor within 24 hours of a missed exam to reschedule

#### 30% GoKids Health Ambassador's Program

1. In addition to our regularly scheduled meetings, students will be asked to observe and participate in 3 sessions at their assigned community setting, and one session at GoKids (~4 hours total depending on the program). Details on times and location will be provided in class. Attendance must be confirmed for credit.
2. Write an observation paper (10%) Students will observe children/adolescents during their time at the community setting. During each visit, students will be required to keep a "journal" about their experiences working with children. One journal entry is expected following each observation period (1 page minimum; double spaced) and should be a

reflection on what you saw, heard and how it relates to material presented in class and through GoKids training. Students are expected to participate in activities and lead exercises/activities as appropriate, increasing responsibility and visibility as visits progress. Further details on expectations will be provided.

3. Working with community sites, GoKids and Dr. Camhi, students will create an age-appropriate and program-appropriate conditioning program. Students will also choose a health theme and teach the children/adolescents about health/wellness relating to topics we discuss in class. The health lesson should be incorporated into the conditioning workout. Students will deliver the program face-to-face to children/adolescents and write up a detailed plan of what they did. Details regarding the assignment will be forthcoming. (20%)

### **20% Clinical Paper and Presentation**

In class, we will cover cardiovascular risk factors, obesity and other common clinical conditions in children/adolescents. Students will pick a “clinical condition” that effects childhood/adolescence. In a written paper (double spaced; 5 pages minimum; 5 journal article references minimum), students will explore something related to physical activity, fitness, diet, nutrition, sedentary behavior or other relevant topic we have discussed this semester. Specific information regarding this paper will be forthcoming. Then, instead of a final exam, students will present their findings to the class in a 10 minute powerpoint presentation.

#### **Note:**

\* Any late assignments will incur a 10% reduction for each day, and no assignments will be accepted after 3 days. If students are absent when an assignment is due, it is up to the student to turn their assignment in on time. The assignment will not be accepted late without an excused absence. In the event of an excused absence, students must contact Dr. Camhi to arrange an appropriate time to turn in the missed assignment.

\* No extra credit work will be accepted to compensate for previously poor performance. However, extra credit may be offered throughout the semester as appropriate by the professor.

\* For all group work associated with the HAP program, it is expected that students work together on certain aspects of the assignment. Division of labor should be equal among the group members. Any problems with group assignments should be brought to the attention of the professor immediately.

<b>Grade</b>	<b>Percent</b>	<b>Grade</b>	<b>Percent</b>
<b>A</b>	93-100	<b>C</b>	73-76
<b>A-</b>	90-92	<b>C-</b>	70-72
<b>B+</b>	87-89	<b>D+</b>	67-69
<b>B</b>	83-86	<b>D</b>	63-66
<b>B-</b>	80-82	<b>D-</b>	60-62
<b>C+</b>	77-79	<b>F</b>	<60

**Academic Honesty:****Code of Conduct and Academic Integrity**

It is the expressed policy of the University that every aspect of academic life--not only formal coursework situations, but all relationships and interactions connected to the educational process--shall be conducted in an absolutely and uncompromisingly honest manner. The University presupposes that any submission of work for academic credit indicates that the work is the student's own and is in compliance with University policies, including its policies on appropriate citation and plagiarism. These policies are spelled out in the Code of Student Conduct. Students are required to adhere to the Code of Student Conduct, including requirements for academic honesty, as delineated in the University of Massachusetts Boston Graduate Catalogue and relevant program student handbook(s) [http://www.umb.edu/life\\_on\\_campus/policies/code](http://www.umb.edu/life_on_campus/policies/code).

**Student Etiquette and Conduct**

In all interactions with faculty and classmates, students are expected to be respectful. To this end, all cell phones and pagers should be turned off or silenced prior to the start of lectures and lab sessions. It is also each student's responsibility to regularly retrieve course materials from the course website, to know the due dates for assignments, to arrive on time for class to hear special and important announcements, to obtain notes from classmates for missed lectures, and to come to class meetings prepared to learn. Communication will be made primarily with your UMB e-mail account and through Blackboard announcements. Please be sure that if you do not use this account often that these e-mails are forwarded to your primary account.

**Accommodations:**

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 offer guidelines for curriculum modifications and adaptations for students with documented disabilities. The University of Massachusetts Boston is committed to providing reasonable academic accommodations for all students with disabilities. If you have a disability and feel you will need accommodations in order to complete course requirements, please contact the Ross Center for Disability Services, Campus Center, Upper Level, Room 211 at 617.287.7430. <http://www.umb.edu/academics/vpass/disability/> This syllabus is available in alternate format upon request. Each eligible student must present and discuss these recommendations with each professor within a reasonable period, preferably by the end of the Drop/Add period.

**Academic Support Services:**

There are services available at Academic Support Services to help you succeed (Campus Center, 1<sup>st</sup> floor, room 1300, 617-287-6550). For more information, see <http://www.academicssupport.umb.edu>

**Tentative Schedule**

**\*\*Dates/ times/topics subject to change – see Blackboard for the most recently updated calendar**

<b>Date</b>	<b>Subject</b>	<b>Homework/Due Dates</b>
Tues, 1/29	Introduction, Syllabus, Growth and Maturation	
Thurs, 1/31	Growth and Maturation	Personal Essay Due HAP: CORI requirements and paperwork due Friday, Feb 1 <sup>st</sup> by 5pm
Tues, 2/5	Growth and Maturation/Body Composition HAP Session 1: Intro/Expectations	HAP: Choose site by 5pm
Thurs, 2/7	Body Composition	HIPPA training due by Friday, Feb 8 <sup>th</sup> by 5pm
Tues, 2/12	Body Composition/Obesity HAP: Elementary School Students	HAP: Begin Observations at Site/GoKids this week
Thurs, 2/14	Obesity Review	
Tues, 2/19	<b>Exam #1 – 45 minutes</b> HAP: Middle School Students	
Thurs, 2/21	Aerobic Fitness	
Tues, 2/26	Aerobic/Anaerobic Fitness HAP: Dealing with Challenging Students	Marathon Boy Response Due
Wed 2/27**	<i>Weight of the Nation Screening 5:30-7:30pm Campus Center Ballroom C</i>	<i>Extra Credit Opportunity</i>
Thurs, 2/28	Anaerobic/Strength	
Tues, 3/5	Strength HAP: Creating a Lesson Plan <i>Weight of the Nation Screening 5:30-7:30pm Campus Center Ballroom C**</i>	World's Strongest Toddler Response Due  <i>Extra Credit Opportunity</i>
Thurs, 3/7	Strength/Thermoregulation	
Tues, 3/12	Catch-up; Review <b>Exam #2 – 45 mins</b> HAP: Working Session Q&A	
Thurs, 3/14	Considerations for the Child Athlete	HAP: Observation Paper Due; Choose Clinical Paper Topic
Tues, 3/19	<b>Spring Break</b>	
Thurs, 3/21	<b>Spring Break</b>	
Tues, 3/26	Physical activity/Physical Education	
Thurs, 3/28	Physical activity/Physical Education	HAP: Outline for Health Lesson Due
Tues, 4/2	Diet and Nutrition	5 references for clinical paper topic due

Thurs, 4/4	Diet and Nutrition	
Tues, 4/9	Review <b>Exam #3 – 45 mins</b>	<b>HAP: Outline for Conditioning program Due</b>
Thurs, 4/11	Sedentary Behavior	
Tues, 4/16	Sedentary Behavior	
Thurs, 4/18	Built Environment	Outline for clinical paper due
Tues, 4/23	Built Environment	<b>HAP: Deliver Program This Week</b>
Thurs, 4/25	<b>No Class; Working Session for Delivery of Program and Group Paper</b>	<b>HAP Group Paper Due</b>
Tues, 4/30	Miscellaneous Topics Review	
Thurs, 5/2	<b>Exam #4</b> TBA	
Tues, 5/7	TBA	Clinical Paper Due
Thurs, 5/9	Clinical Presentations	
Tues, 5/14	Clinical Presentations	
<i>Thurs, 5/16**</i>	<i>Research Day</i>	<i>Extra Credit Opportunity</i>

*\*\*Note: These are activities not scheduled during our normal class time*

**Boston Public Schools are out of session the week of Feb 18<sup>th</sup>-22<sup>nd</sup>, March 18<sup>th</sup>, April 15-19<sup>th</sup>**