LEHMAN COLLEGE

OF

THE CITY UNIVERSITY OF NEW YORK

A PROPOSAL TO ESTABLISH A DEGREE PROGRAM IN

HUMAN PERFORMANCE AND FITNESS

LEADING TO A

MASTER OF SCIENCE (MS)

SPONSORED BY
THE DEPARTMENT OF HEALTH SCIENCES
Approval: 12/6/2017

APPROVED BY
LEHMAN COLLEGE FACULTY SENATE
Approval: ADD DATE

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LEHMAN COLLEGE
CITY UNIVERSITY OF NEW YORK

Proposal to Establish

A Master of Science (MS) in Human Performance and Fitness

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i. Executive Summary

The Exercise Science Program in the Department of Health Sciences at Lehman College of The City University of New York proposes to establish master's degree program in Human Performance and Fitness leading to a Master of Science (MS) degree. It is proposed that the new program enroll its first students in the Fall of 2018. This program will be offered under the sponsorship of the Exercise Science Program in Department of Health Sciences. The proposed program aims to equip students with necessary skills and competencies required to function efficiently in the field of exercise science, and physical fitness and wellness. With personal health and fitness occupying much of our nation's attention, the new program – a graduate degree in Human Performance and Fitness, stressing and tying together the studies of anatomy, kinesiology, physiology, nutrition and exercise – is an excellent way to tap into a plentiful job market whose goal is the promotion of a healthier nation through exercise and fitness programs. The program will emphasize the preparation of the students for corporate and community fitness programs, health clubs, and similar fitness-related industries. Although the program does not fulfill teacher certification requirements, it would be of particular appeal to public school teachers (primary and secondary) in health and physical education, who are required by New York State to obtain a master's degree for continued employment. Positions in sales or marketing of medical, fitness, sports supplements and sports-related equipment may also be appropriate for students with this degree. In addition, the program will prepare students for doctoral programs in areas related to exercise science, and carry out research that advances the emerging body of literature in human health, fitness and performance.

According to the U.S. Department of Labor Bureau of Labor Statistics, employment of fitness trainers and instructors is expected to grow 10% from 2016 to 2026, outpacing the average for all occupations. The accelerating demand is attributed to businesses, government and insurance organizations becoming increasingly more cognizant of the benefits of health and fitness programs for their employees, and thereby incentives to join gyms and other types of health clubs is expected to increase the need for fitness professionals. Moreover, employment in the field is expected to grow as the general public continues to increase participation in organized sports as a form of entertainment, recreation, and physical conditioning, particularly aging baby boomers who are staying active later in life. In addition, physical education teachers in secondary schools are required to obtain a master's degree to maintain their jobs and gain promotion. Thus, our proposed program will be of prime interest to a broad range of individuals.

Demand for the program is evident in current Lehman students. The teaching faculty and student advisors in the program of Exercise Science at Lehman College regularly receive inquiries from students who express a desire to enroll in a Master's degree program in an exercise-related field of study. The Exercise Science program at Lehman College currently has over 300 declared majors and many students in the program are very much interested in pursuing a graduate degree in the field. In addition, the program has established itself as one of the premier research institutions in the field of strength and conditioning. The faculty have combined to publish well over 100 scientific papers in the past five years, and have spoken at numerous national and international conferences. As such, the faculty receives many inquiries from prospective students around the world about the availability of studying in a graduate-level exercise-related program at Lehman.

The proposed Graduate Degree Program in Exercise Science at Lehman College is consistent with the 90x30 initiative that seeks to double the number of high-quality degrees and certificates that students at the college will earn by the year 2030. As noted in the initiative, the Bronx ranks next to last in educational achievement of all 62 counties in New York State, with only 27.7% of residents attaining an associate's degree or higher. Our

proposed program will help to increase the employment, wages, and physical, mental, and emotional health and well-being of the community.

The proposed curriculum will be supported by the current Department of Health Sciences. After mapping out a program in advance with the Graduate Program Director, students must complete, with an average of B or better, 33 total credits in the Human Performance and Fitness degree program. All students will be required to take 18 credits in common core courses. Students wishing to pursue the thesis track option will take an additional 9 elective credits plus 6 credits of thesis. Students opting for the capstone track will take an additional 12 elective credits plus 3 credits of capstone.

The Human Performance and Fitness Program is currently expected to enroll 15 new students in the first year. It is expected that the revenues generated from the initial enrollment will make the program self-sustaining from the outset. Given the anticipated student enrollment moving forward, we will hire a full-time faculty line for a fourth faculty member after the first year of implementation. As more qualified students apply, we anticipate expanding enrollment to 25 new students in the second year and 30 new students in the third year. As student enrollment increases, an additional faculty member would be requested to help meet teaching demand.

ii. Abstract

The Exercise Science Program in the Department of Health Sciences at Lehman College of The City University of New York proposes to establish a master's degree program in Human Performance and Fitness leading to the Master of Science (MS) degree. It is proposed that the new program enroll its first students in the Fall of 2018. The proposed program aims to equip students with necessary skills and competencies required to function efficiently in the exercise science, and physical fitness and wellness. With personal health and fitness occupying much of our nation's attention, the new program – a graduate degree in Human Performance and Fitness, stressing and tying together the studies of anatomy, kinesiology, physiology, nutrition and exercise – is an excellent way to tap into a plentiful job market whose goal is the promotion of a healthier nation through exercise and fitness programs. The program will emphasize the preparation of the students for corporate and community fitness programs, health clubs, and similar fitness-related industries. Although the program does not fulfill teacher certification requirements, it is suitable for public school teachers (primary and secondary) in health and physical education for completion of their master's degree, who are required by New York State to obtain a graduate degree for continued employment. Positions in sales or marketing of medical, fitness, sports supplements and sports-related equipment may also be appropriate for students with this degree. In addition, the program will prepare students for doctoral programs in areas related to exercise science, and carry out research that advances the emerging body of literature in human health, fitness and performance.

1. Purposes and Goals

Lehman College of The City University of New York proposes to establish master's degree program in Human Performance and Fitness leading to the Master of Science (MS) degree. It is proposed that the new program enroll its first students in Fall 2018. This program will be offered under the sponsorship of the Department of Health Sciences. The proposed program aims to equip students with necessary skills and competencies required to function efficiently in the exercise science, physical fitness and wellness, and/or community health education profession. With personal health and fitness occupying much of our nation's attention, the new program – a major in Human Performance and Fitness, stressing and tying together the studies of anatomy, kinesiology, physiology, nutrition and exercise – is an excellent way to tap into a plentiful job market whose goal is the promotion of a healthier nation through exercise and wellness programs. The program will emphasize the preparation of the students for corporate and community fitness programs, health clubs, and similar fitness-related industries. Although the program does not fulfill teacher certification requirements, it would be of particular appeal to public school teachers (primary and secondary) in health and physical education, who are required by New York State to obtain a master's degree for continued employment. Positions in sales or marketing of medical, fitness, sports supplements and sports-related equipment may also be appropriate for students with this degree. In addition, the program will prepare students for doctoral programs in areas related to exercise science, and carry out research that advances the emerging body of literature in human health, fitness and performance.

2. Needs

A. National needs

Exercise science, the study of physiological and functional adaptations to movement, encompasses a wide variety of disciplines including, but not limited to: exercise physiology, sports nutrition, sport psychology, motor control/development, and biomechanics. The study of these disciplines is integrated into the academic preparation of exercise science professionals. Exercise science professionals work in health services and the fitness industry, and are skilled in evaluating health behaviors and risk factors, conducting fitness assessments, designing appropriate exercise prescriptions, and motivating individuals to modify negative health habits and maintain positive lifestyle behaviors for health promotion. They conduct these activities in health care, university, corporate, commercial and community settings where their clients participate in health promotion and fitness-related activities.

Physical activity is a positive modulator of health and wellness. A dose-response relationship has been shown between the number of hours performing leisure time physical activity, with those at the highest levels of participation showing a 37% lower risk of all-cause mortality compared to those who are sedentary [1]. Similar findings are seen for reductions in mortality from cardiovascular disease and cancer with increasing amounts of physical activity. Moreover, physical inactivity has a marked detrimental effect on the economy. Recent evidence shows that up to 2.6% of total direct health costs can be attributed to sedentary behavior, leading researchers to conclude that the promotion of physical activity is an important non-pharmaceutical action to substantially reduce the costs of public health care [2].

The costs of inactivity are related, in large part, to negative consequences of sedentary behavior on body composition; specifically, the ratio of fat mass to lean mass. A national obesity epidemic exists in the United States, with more than 35.0% of men and 40.4% of women considered obese [3]. Obesity is strongly associated with increased cardiometabolic risk, and it is an independent risk factor for all-cause mortality [4]. Alarmingly, ~17% of 2- to 19-year-olds in the United States are classified as obese [5]. Obese youth are at risk for short-term

medical and psychosocial consequences including abnormalities in growth, blood pressure, lipids, and glucose metabolism, as well as negative self-image and lower quality of life [6, 7]. In addition, overweight youth are at risk for becoming obese and developing medical consequences including increased risk of subsequent diabetes, cardiovascular disease, hypertension, gallbladder disease, and osteoarthritis [8, 9].These health problems, which were extremely rare before adulthood, are now occurring at increasingly younger ages. Minority populations, including African-Americans and Hispanics, as well as individuals of low socio-economic status are particularly at risk for obesity and its associated cardiometabolic risks [10, 11].

Moreover, an offshoot of the aging process is a gradual and progressive loss of muscle tissue. Human muscle mass and force reach peak levels between the second and fourth decades of life [12]. Thereafter, it is estimated that we lose approximately ½% of our muscle mass per year after the fourth decade of life, increasing to 1%–2% annually after the age of 50 and then accelerating to 3% annually after the age of 60 [13, 14]. This age-associated loss of muscle has been termed sarcopenia. The rapidly aging population combined with progressively greater life expectancy makes sarcopenia a major public health concern [14]. Maintenance of adequate muscle mass has been shown to play a primary role in preventing functional impairment as well as the onset of a multitude of chronic diseases [15]. The decrease in muscular strength and power associated with sarcopenia is at the root of many of these health and wellness issues independent on age, size, physical activity, or co-morbidities, indicating a link between sarcopenia and generalized frailty [14]. Muscle loss contributes to a reduced ability to carry out activities of daily living (ADLs), impairing the capacity for independent living and thereby increasing the burden to the caregiver and community [15, 16]. Although aging in itself has a negative impact on muscle development over time, sarcopenia is largely a function of sedentarism; regimented exercise is widely considered to be the most effective strategy to combat the age-related loss of muscle and strength [17, 18].

The aforementioned facts indicate a vital role for fitness professionals to make an impact on society. This is borne out by the burgeoning number of career opportunities for those in the field. According to the U.S. Department of Labor Bureau of Labor Statistics, employment of fitness trainers and instructors is expected to grow 10% from 2016 to 2026, outpacing the average for all occupations [19]. The accelerating demand is attributed to businesses, government and insurance organizations becoming increasingly more cognizant of the benefits of health and fitness programs for their employees, and thereby incentives to join gyms and other types of health clubs is expected to increase the need for fitness professionals. Moreover, employment in the field is expected to grow as the general public continues to increase participation in organized sports as a form of entertainment, recreation, and physical conditioning, particularly aging baby boomers who are staying active later in life.

The health and fitness industry is a dynamic and expanding field. As health care in America continues to remodel itself, exercise science professionals are certain to play an expanding role as providers of many fitness, health and wellness services within a wide variety of delivery systems. The elimination of negative health behaviors for some segments of the population will guide much of the planning and implementing of appropriate wellness programs. Perhaps one of the more exciting challenges facing the exercise science professional going forward is knowing that many changes are coming and that possessing higher levels of education will enhance their career options.

A major focus of the Healthy People 2020 initiative is to improve the health of all Americans through the promotion of increased physical activity, which is stated to “improve the health and quality of life of Americans

of all ages, regardless of the presence of a chronic disease or disability" [20]. As such, the private, public and government sectors are destined to become pivotal players in helping Americans choose healthy lifestyles, while offering more employment opportunities for the exercise science professional. In addition, the marketplace is becoming much more global, offering several international career opportunities in worksite health promotion centers that provide health education, fitness programming, fitness assessment, lifestyle activities and behavior modification programs.

A master's degree is a pre-requisite for many exercise-related jobs. Most of the higher paying positions in the field require graduate level training, and the ability to advance in the field is often predicated on educational background. For example, a career as a strength and conditioning coach at Division 1 and professional levels almost invariably requires a master's degree to interview for the position. Similarly, teachers in physical education are required to obtain a master's degree to continue employment, even though they are already have achieved teaching certification. Moreover, fitness trainers who possess a master's degree receive higher pay at many organizations than those who do not, and the ability to rise to managerial levels is often predicated on educational status. Employment titles of graduates in the program include but are not limited to: Strength and Conditioning Coach; Fitness Manager; Sports Scientist; Master-Level Personal Trainer; Chief Science Officer (fitness/supplement-related company); and Corporate Wellness Coordinator. Thus, a master's degree is very important both to employment and career advancement in the field.

B. Regional and Local Needs

Recent statistics from the Robert Wood Johnson Foundation show that the Bronx is the least healthy county in New York State [21]. It ranks last in quality of life, with 28% of Bronx residents reporting poor to fair health; no other borough in New York City (NYC) exceeded 17% in this metric (see Figure 1). Moreover, according to the Bronx Healthy REACH, a project of the New York City based Institute for Urban Family Health that addresses racial disparities in health outcomes in areas of the southwest Bronx where the population is more than 95% Black and Hispanic, residents of the Bronx have the greatest percentage of obesity and diabetes among residents of all other NYC residents. These statistics are borne out in 2017 data showing adult obesity rates (30%) and physical inactivity levels (31%) in Bronx County are far above the State average and higher than any other borough [21] (see Figures 2 and 3).

The combination of obesity and physical inactivity has a decidedly negative effects on their cardio-metabolic health, and this fact is consistent with those who reside in the Bronx. According to the Center for Disease Control, an estimated 12.3% of residents are diagnosed as diabetic; more than any other borough [22] (See Figure 4). Furthermore, among all diabetic Bronx residents, the greatest numbers reside in neighborhoods populated primarily by African-American and Hispanic residents, with diabetes being most prevalent among blacks and Hispanics in all of New York City.

Alarmingly, the health crisis in the Bronx extends to the borough's youth. In NYC, over 20% of students in elementary school have a body mass index greater than the 95th percentile, and the rate is 31% among Hispanic students, who comprise the majority of students in the Bronx [23]. This index percentile places the students at great risk for coronary heart disease and other associated conditions. ***Based on the aforementioned information, there is a dire need in the Bronx for qualified exercise science professionals who can work to help others reduce modifiable disease risk factors and improve quality of life***.

Figure 1

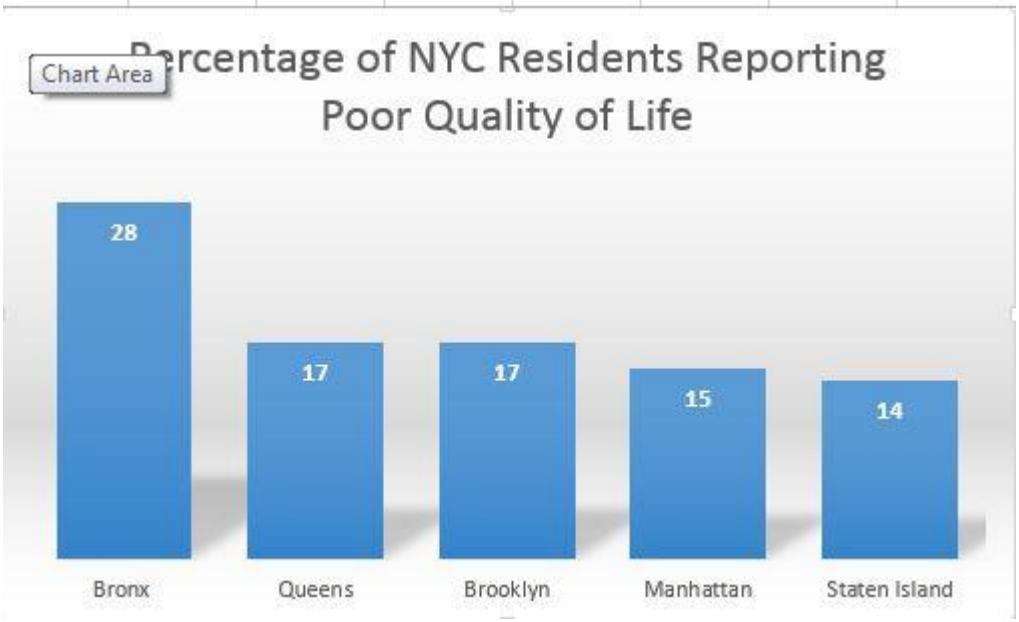


Figure 2

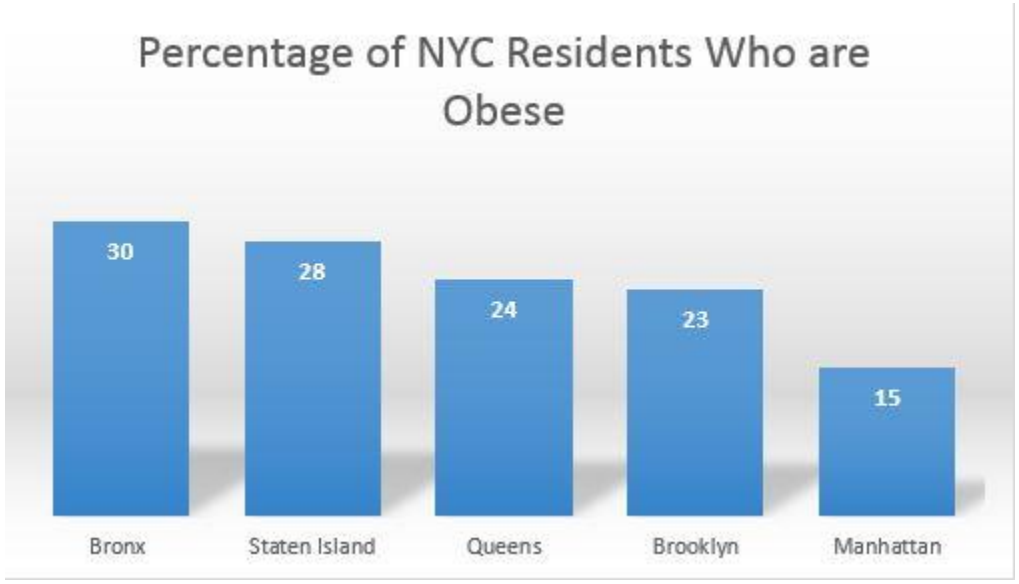


Figure 3

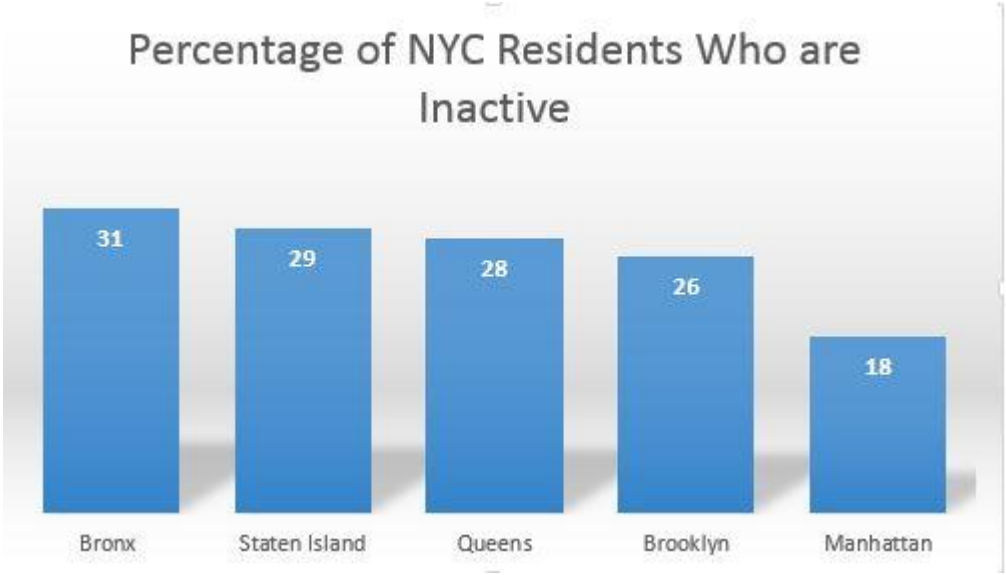
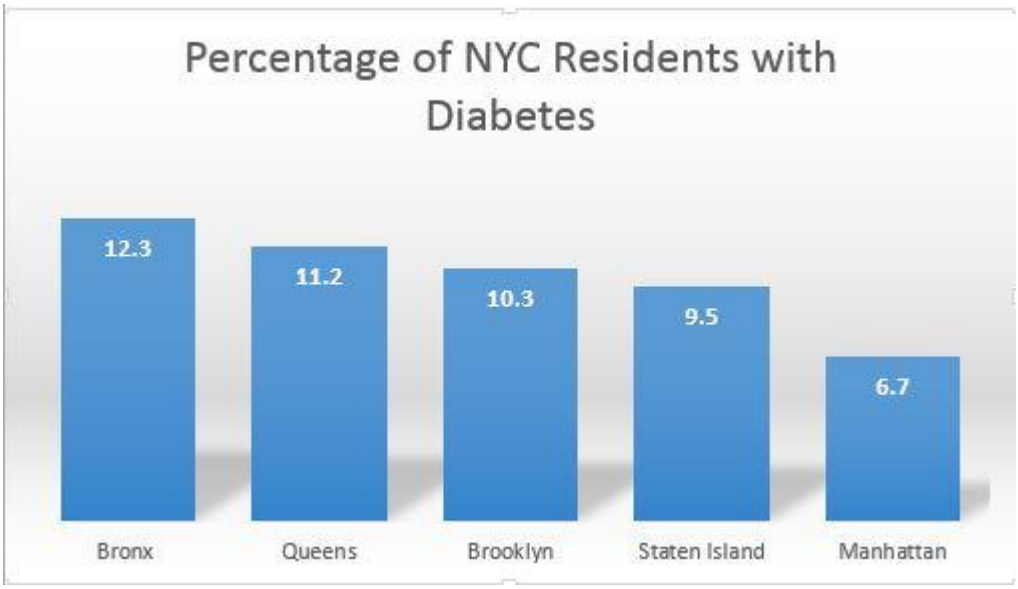


Figure 4



C. Institutional Needs

The Bronx is in dire need of qualified professionals trained in exercise science to meet the pressing health and fitness needs of its unique population. A master's degree is the acknowledged advanced degree for health and fitness professionals. It is a credential that sets recipients apart from other practitioners, and is generally required for attaining mid- to high-level positions in fitness and wellness, as well as attaining higher pay in existing positions. Although the program does not fulfill teacher certification requirements, it would be of particular appeal to public school teachers (primary and secondary) in health and physical education, who are required by New York State to obtain a master's degree for continued employment. In addition, a master's degree is generally a pre-requisite for entry into doctoral programs for those who seek careers as professors and/or researchers in the field. There are a number of universities across the country that provide programs related to human performance and fitness, lending credence to the popularity of this degree.

Currently, there is no institution located in the Bronx that provides a master's degree in any exercise science-related area. Within the City University of New York, the only institutions awarding such a degree are Queens College (MS in Nutrition and Exercise Sciences) and Brooklyn College (MS in Exercise and Sport Science). Further, the program proposed herein would be the only graduate degree program in New York City specifically developed with a focus on enhancing human performance and fitness. This not only has applicability to disease prevention, but also to promoting greater athletic abilities, which is a primary goal of an increasing percentage of the population and of particular relevance to youth fitness. Importantly, a Lehman College master's degree program in Human Performance and Fitness would offer academic training where its residents live and work, without having to travel 3 or more hours per day to attend Brooklyn or Queens for that education and training.

As noted above, the Lehman College Master's Degree Program in Human Performance and Fitness would differ from the programs at Brooklyn College and Queen's College insofar as it will be more specific to the area of human performance, emphasizing resistance training and coaching theory as well as sports management/marketing. The programs at the other institutions are more focused on cardiorespiratory fitness and rehabilitation. There is a big need and demand in the methodology of coaching and training principles in the Bronx and its surrounding area since many physical education teachers and health educators coach their school teams but do not have enough foundation to do so effectively. Our program will provide the requisite advanced knowledge about training in different sports, leading to better coaching and management of athletes. Moreover, personal trainers and other fitness professionals require this knowledge to work with a growing-segment of the population who have athletic-related fitness aspirations.

The proposed graduate degree program in Human Performance and Fitness at Lehman College is consistent with the 90x30 initiative that seeks to double the number of high-quality degrees and certificates that students at the college will earn by the year 2030. As noted in the initiative, the Bronx ranks next to last in educational achievement of all 62 counties in New York State, with only 27.7% of residents attaining an associate's degree or higher. Our program will help to increase the employment, wages, and physical, mental, and emotional health and well-being of the community.

3. Students

A. Demand for Master's Degree in Human Performance and Fitness

The teaching faculty and student advisors in the program of Exercise Science at Lehman College regularly receive inquiries from students who express a desire to enroll in a Master's degree program in an exercise-

related field of study. The Exercise Science program at Lehman College currently has over 300 declared majors and many students in the program are very much interested in pursuing a graduate degree in the field. In addition, the program has established itself as one of the premier research institutions in the field of strength and conditioning. The faculty have combined to publish well over 100 scientific papers in the past five years, and have spoken at numerous national and international conferences. As such, the faculty receives many inquiries from prospective students around the world about the availability of studying in a graduate-level exercise-related program at Lehman.

To assess interest of undergraduate exercise science students in the proposed master's degree program, we carried out a survey in four of our upper level courses (EXS 423, EXS 424, EXS 425, and EXS 430) asking the following questions:

1. Would you be interested in enrolling in the program?
    a. Yes _____
    b. No_____
2. If yes, what time period would you consider enrolling
    a. Within 1 year graduation _____
    b. Within 2 years graduation _____
    c. Within 3 years graduation _____
3. If yes, what would your primary reason be for attending:
    a. Better pay_____
    b. Career advancement _____
    c. Personal knowledge _____

A total of 74 students responded to the survey. Of the respondents, 70% stated that they would be interested in attending the program. A majority (69%) of those interested in attending indicated a timeline for applying of 1 year after graduation; 23% indicated a timeline of 2 years and 8% indicated a timeline of 3 years. The primary reasons given for attending were career advancement (75%), better pay (13%) and personal knowledge (12%). These findings highlight the overwhelming interest in the program from current Lehman exercise science students.

It is our intention to admit a class of 15 students in the fall semester of the first year, with a smaller number of students entering in the spring semester and then progressively increasing over time as the program gains popularity. As shown in Table 1, we anticipate that the program will approach 90 enrolled students after 5 years. The projected enrollment is based on the number of inquiries that we have received over the past several years, the marketing efforts that we will pursue, and the anticipated publicity that is generated from the program's success while factoring in an attrition rate of 1 student per semester.

	2018-19	***2019-20***	***2020-21***	***2021-22***	***2022-23***
Fall New	15	10	15	20	25
Fall Continuing	-	18	23	36	48
Fall Total	**15**	**28**	**38**	**56**	**73**
Spring Continuing	14	27	32	43	56
Spring New	5	12	15	20	30

Spring Total	**19**	**39**	**47**	**63**	**86**

Table 1: 5-Year Projected Enrollment

B. Recruitment Strategy

The targeted student body for the Lehman College Graduate Program in Human Performance and Fitness will focus on students graduating from the Lehman College Exercise Science Undergraduate Program, as well targeting those graduating from other exercise-related undergraduate programs around the world. A mixed marketing approach will be developed in conjunction with the Office of Graduate Admission to target current educators, fitness organizations, pharmaceutical companies, undergraduate exercise science directors and healthcare organizations. Social media platforms will also be used to target prospective students and make them aware of the opportunities for graduate studies in Human Performance and Fitness at Leman. In addition, we will send emails to the administration at secondary schools in the Tri-State area so they can let teachers in health and physical education know about the possibility of obtaining their master's degree in our program to meet the requirements for continued employment.

4. Curriculum

The proposed curriculum will be supported by the current Department of Health Sciences. After mapping out a program in advance with the Graduate Program Director, students must complete a minimum of 33 credits in Human Performance and Fitness, attaining an average of B or better. All students will be required to take 18 credits in common core courses. Students will then have two options: A 6-credit thesis consisting of 9 elective credits or a 3-credit capstone project consisting of 12 elective credits. Students will be encouraged to enroll in a full course load (9 credits) each semester to facilitate completion of the program in four semesters. Consistent with the Lehman undergraduate/graduate initiative, students enrolled in the undergraduate exercise science program at Lehman with a GPA of 3.0 or higher and who have taken >90 credits will be permitted to take up to 12 credits of graduate classwork and receive credit for the classes at the master's degree level if/when they matriculate into the Human Performance and Fitness program.

A. Admission Requirements

- Bachelor's degree (or its equivalent) from an accredited college or university
- Demonstration of the potential to pursue graduate study successfully—that is, attainment of a minimum undergraduate Grade Point Average (GPA) of 3.0 in the undergraduate record as a whole and a 3.0 in courses specific to exercise science. Extraordinary circumstances for applicants with a lower GPA will be considered on a case-by-case basis at the discretion of the program director.
- A minimum of 30 credit hours in exercise-related coursework. Those who do not meet these requirements can apply for special circumstances and admission will be considered on case-by-case basis.
- Submission of three letters of recommendation, at least two of which must be from a person directly involved in the field of exercise science, either as a professor, researcher, or practitioner
- Submission of a personal statement of approximately 500 words indicating as precisely as possible the applicant's preparation for master's work and interest in pursuing a career in the fitness field

B. Proposed Graduate Curriculum

The requirements of the proposed Master of Science degree program in Human Performance and Fitness are as follows:

Option 1: Thesis

Core Courses ..... 18 Credits

- EXS 501 Physical Activity, Exercise and Fitness ..... 3 credits
- EXS 502 Advanced Exercise Physiology ..... 3 credits
- EXS 503 Advanced Research Methods in Exercise Science ..... 3 credits
- EXS 504 Advanced Exercise Testing and Prescription ..... 3 credits
- EXS 505 Advanced Sports Nutrition ..... 3 credits
- EXS 506 Applied Training Methodologies ..... 3 credits

Elective Courses ..... 9 Credits

- EXS 615 Advanced Biomechanics and Kinesiology ..... 3 credits
- EXS 616 Advanced Motor Learning ..... 3 credits
- EXS 626 Fitness Management and Marketing ..... 3 credits
- EXS 665 Psychology of Sport ..... 3 credits
- **EXS 680 Special Topics in Exercise Science ..... 3 credits

Thesis ..... 6 Credits

- EXS 790 Thesis Workshop 1 ..... 3 credits
- EXS 791 Thesis Workshop 2 ..... 3 credits

Option 2: Capstone Project

Core Courses ..... 18 Credits

- EXS 501 Physical Activity, Exercise and Fitness ..... 3 credits
- EXS 502 Advanced Exercise Physiology ..... 3 credits
- EXS 503 Advanced Research Methods in Exercise Science ..... 3 credits
- EXS 504 Advanced Exercise Testing and Prescription ..... 3 credits
- EXS 505 Advanced Sports Nutrition ..... 3 credits

EXS 506 Applied Training Methodologies ..... 3 credits

Elective Courses ..... 12 Credits

EXS 615 Advanced Biomechanics and Kinesiology ..... 3 credits

EXS 616 Advanced Motor Learning ..... 3 credits

EXS 626 Fitness Management and Marketing ..... 3 credits

EXS 665 Psychology of Sport ..... 3 credits

**EXS 680 Special Topics in Exercise Science ..... 3 credits

Capstone Project ..... 3 Credits

EXS 795 Capstone Project Workshop ..... 3 credits

C. Proposed Sequence of Courses (Thesis Option)

Semester 1:

EXS 501 Physical Activity, Exercise and Fitness

EXS 502 Advanced Exercise Physiology

EXS 503 Advanced Research Methods in Exercise Science

Semester 2:

EXS 504 Advanced Exercise Testing and Prescription

EXS 505 Advanced Sports Nutrition

EXS 506 Applied Training Methodologies

Semester 3:

EXS 615 Advanced Biomechanics and Kinesiology

EXS 665 Psychology of Sport

EXS 790 Thesis Workshop 1

Semester 4:

EXS 626 Fitness Management and Marketing

EXS 791 Thesis Workshop 2

D. Proposed Sequence of Courses (Capstone Option)

Semester 1:

EXS 501 Physical Activity, Exercise and Fitness

EXS 502 Advanced Exercise Physiology

EXS 503 Advanced Research Methods in Exercise Science

Semester 2:

EXS 504 Advanced Exercise Testing and Prescription

EXS 505 Advanced Sports Nutrition

EXS 506 Applied Training Methodologies

Semester 3:

EXS 615 Advanced Biomechanics and Kinesiology

EXS 665 Psychology of Sport

EXS 616 Advanced Motor Learning

Semester 4:

**EXS 680 Special Topics in Exercise Science

EXS 795 Capstone Project Workshop

denotes existing course

E. Thesis Requirement (Option 1)

Students choosing the thesis option will be required to submit a final thesis on a research study on a topic of their choice that must be approved by a faculty advisor. Students will be advised to secure a working relationship with a faculty advisor whose area of expertise aligns with their thesis interest by the time they have completed 15 credits in the program. The thesis must be a study of publishable quality; students in this option will be encouraged and provided with appropriate support to submit their project for publication in a refereed journal. The final thesis will be read by the faculty advisor and a second reader approved by the Graduate Program Director. Two copies of the thesis approved by the faculty advisor—one in electronic format (.pdf), one in print—will be submitted to the Graduate Program Director.

F. Capstone Requirement (Option 2)

Students choosing the capstone option will be required to submit a final project on a topic of their choice. Students will be advised to secure a working relationship with a faculty advisor whose area of expertise aligns with their capstone interest by the time they have completed 15 credits in the program. The project should be either a narrative or systematic review of literature; meta-analysis of data can also be included as part of the capstone project. The project must be of publishable quality; students in this option will be encouraged and provided with appropriate support to submit their project for publication in a refereed journal. The final project will be read by the faculty advisor and a second reader approved by the Graduate Program Director. Two copies of the project approved by the faculty advisor—one in electronic format (.pdf), one in print—will be submitted to the Graduate Program Director.

5. Cost Assessment

A. Faculty

Lehman College has three full-time faculty members in exercise science as listed in Table 2 below. Each member is fully qualified to teach the courses in the program. In addition, the exercise science program has 6 adjunct faculty with a minimum of a master's degree in an exercise-related field.

Table 2: Lehman College Faculty in Exercise Science

Name	***Rank***
Gul Tiryaki-Sonmez	Professor
Brad Schoenfeld	Assistant Professor
Andrew Alto	Instructor

New Faculty

We plan to hire a full-time lecturer (see Appendix F for qualifications, etc.) line for a fourth faculty member in the Graduate Program in Human Performance and Fitness after the first year of implementation. The Program is currently expected to enroll 15 new students in the first year. As more qualified students apply, we anticipate expanding enrollment to 25 new students in the second year and 30 new students in the third year. As student enrollment increases, an additional faculty member would be requested.

Form SED D 7: Faculty Biographical Sketches

Course Title	**# credits**	**Faculty Member Assigned to each Course**	**Highest Earned Degree and Discipline; College or University**	**Relevant Occupational Experience**	**Relevant Other Experience, Certificates**	**Recent Scholarly Contributions**
EXS 601 Physical Activity, Exercise and Fitness	3	Gul Sonmez	PhD in Exercise Science, University of New Mexico	Experience in coaching athletes		Numerous publications in peer-reviewed journals, plus presentations, and invited talks
EXS 602 Advanced Exercise Physiology	3	Gul Sonmez	PhD in Exercise Science, University of New Mexico	Experience in coaching athletes		Numerous publications in peer-reviewed journals, plus presentations, and invited talks
EXS 603 Advanced	3	Brad Schoenfeld	PhD in Health Promotion and	Experience in personal	Certified Strength and	Numerous publications in

Research Methods in Exercise Science			Wellness, Rocky Mountain University	training, exercise and sports nutrition consultant to amateur and professional sports teams	Conditioning Specialist	peer-reviewed journals and textbooks, plus awards, presentations, and invited talks
EXS 604 Advanced Exercise Testing and Prescription	3	Gul Sonmez	PhD in Exercise Science, University of New Mexico	Experience in coaching athletes		Numerous publications in peer-reviewed journals, plus presentations, and invited talks
EXS 605 Advanced Sports Nutrition	3	Brad Schoenfeld	PhD in Health Promotion and Wellness, Rocky Mountain University	Experience in personal training, exercise and sports nutrition consultant to amateur and professional sports teams	Certified Strength and Conditioning Specialist	Numerous publications in peer-reviewed journals and textbooks, plus awards, presentations, and invited talks
EXS 606 Applied Training Methodologies	3	Brad Schoenfeld	PhD in Health Promotion and Wellness, Rocky Mountain University	Experience in personal training, exercise and sports nutrition consultant to amateur and professional sports teams	Certified Strength and Conditioning Specialist	Numerous publications in peer-reviewed journals and textbooks, plus awards, presentations, and invited talks
EXS 615: Advanced Kinesiology and Biomechanics	3	Andrew Alto	MA in Health Education and Promotion, Lehman College	Experience in personal training	Certified Strength and Conditioning Specialist	Refereed paper in review plus conference presentations
EXS 616: Advanced Motor Learning and Performance	3	Andrew Alto	MA in Health Education and Promotion, Lehman College	Experience in personal training	Certified Strength and Conditioning Specialist	Refereed paper in review plus conference presentations
EXS 626: Fitness Management and Marketing	3	Gul Sonmez	PhD in Exercise Science, University of New Mexico	Experience in coaching athletes		Numerous publications in peer-reviewed journals, plus presentations, and invited talks
EXS 665: Psychology of Sport	3	Gul Sonmez	PhD in Exercise Science,	Experience in coaching athletes		Numerous publications in peer-reviewed

			University of New Mexico			journals, plus presentations, and invited talks
EXS 680: Special Topics in Exercise Science	3	Brad Schoenfeld	PhD in Health Promotion and Wellness, Rocky Mountain University	Experience in personal training, exercise and sports nutrition consultant to amateur and professional sports teams	Certified Strength and Conditioning Specialist	Numerous publications in peer-reviewed journals and textbooks, plus awards, presentations, and invited talks
EXS 790: Thesis Workshop Thesis Workshop 1	3	Brad Schoenfeld	PhD in Health Promotion and Wellness, Rocky Mountain University	Experience in personal training, exercise and sports nutrition consultant to amateur and professional sports teams	Certified Strength and Conditioning Specialist	Numerous publications in peer-reviewed journals and textbooks, plus awards, presentations, and invited talks
EXS 791: Thesis Workshop 2	3	Brad Schoenfeld	PhD in Health Promotion and Wellness, Rocky Mountain University	Experience in personal training, exercise and sports nutrition consultant to amateur and professional sports teams	Certified Strength and Conditioning Specialist	Numerous publications in peer-reviewed journals and textbooks, plus awards, presentations, and invited talks
EXS 795: Capstone Project Workshop	3	Brad Schoenfeld	PhD in Health Promotion and Wellness, Rocky Mountain University	Experience in personal training, exercise and sports nutrition consultant to amateur and professional sports teams	Certified Strength and Conditioning Specialist	Numerous publications in peer-reviewed journals and textbooks, plus awards, presentations, and invited talks

Form SED D 8: Status of Each Faculty Member Listed in the Previous Pages

Faculty member	**Title of position at Lehman College**	**Full-time (FT) or adjunct (Adj) at Lehman**	**If part-time in the program, specify other responsibilities**
Gul Sonmez	Professor	FT	N/A
Brad Schoenfeld	Assistant Professor	FT	N/A

Andrew Alto	Instructor	FT	N/A

Form SED D 9: Number and Title of New Positions to Be Established and Minimum Qualifications

Title of Position	# New Positions	Minimum Qualifications
Lecturer	1	PhD in exercise-related coursework

B. Facilities and Equipment

No additional space and equipment will be required for initiation of the program. The Lehman Human Performance Laboratory is a state-of-the-art facility that has received substantial funding from grants. We currently have several hundred thousand dollars-worth of equipment that allows sophisticated exercise-related testing and training for both practical and research purposes. Consistent with CUNY guidelines, we will seek to develop partnerships with supplement companies, equipment companies, hospitals, and other organizations to help pay for additional equipment, sponsorships of student travel for conferences and presentations, and other relevant expenses that may arise.

C. Library and Instructional Materials:

Lehman College's Leonard Lief Library is housed in a modern, four-story building with an online catalog and circulation system providing access to over 200 online subscription databases. More than 300 state-of-the-art computer workstations are accessible for student use with full Internet access, as well as iPads, laptops, and eReaders available for loan at the Circulation-Reserve Desk. The Graduate Research Room is reserved exclusively for graduate student use, while the Access and Technology Center provides assistive technology for students with special needs. The Library's homepage [http://www.lehman.edu/library/] links to the CUNY+ online library catalog, licensed electronic resources, electronic journals, and eBook packages.

The monograph collection of over 362,674 volumes is supplemented by 652,700 microforms (including ERIC documents), 95,112 electronic journals, and over 554,885 electronic books. The Library is a designated Depository for state and federal government documents. The research collection is augmented to support a robust undergraduate and graduate curriculum. Interlibrary loan service and CUNY's own library intra-borrowing system are available to members of the community.

In addition to general and specialized non-circulating reference collections, the Library offers the Reserve collection including textbooks for requested courses. Specialized service areas include the Periodicals Room, well-equipped instructional labs, and Bronx History Archives. Reference librarians support student research during library hours, as well as offer special Consultations and online reference chat. The Library has an active instructional program instilling tenets of information literacy and critical evaluation of information sources.

The Library licenses a wide array of exercise-related journals from major publishers (Elsevier, Lippincott Williams & Wilkins, and Wiley), providing free access to thousands of peer-reviewed literature articles. When an article is not immediately available, it can usually be fulfilled via Interlibrary Loan.

D. Budget Tables

The new program will not affect the needs of Lehman College Library or Lehman's central information resources. The projected costs and revenues are indicated below in Tables 3 and 4.

The Projected Revenues below use the figure of $440 per graduate credit. It is expected that the Human Performance and Fitness Program will be self-sustaining from the outset and given the anticipated student enrollment could hire an additional faculty member after the first year.

Table 3

Projected Expenditures for the Proposed MS Program in EXS *

Expenditures	1st Year 2018-2019 Academic Year	2nd Year 2019-2020 Academic Year	3rd Year 2020-2021 Academic Year	4th Year 2021-2023 Academic Year	5th Year 2023-2024 Academic Year
Faculty New Resources	$11,000 adjunct faculty	Salary for one full-time lecturer: $52,258+ fringe benefits 25,606 + start-up package 10,000 Total this year= $87,864	Salary for one full-time lecturer: $52,258 + fringe benefits 25,606 Total this year= $77,864	Salary for one full-time lecturer : $52,258+ fringe benefits 25,606 Total this year= $77,864	Salary for one full-time lecturer: $52,258 + fringe benefits 25,606 Total this year= $77,864
Equipment New Resources	Computer hardware: $3,000 Relevant software: $1,000 Supplies: $1,000 TOTAL: $5,000	0	0	0	0
Library	Additional Users: $500	Additional Users: $500	Additional Users: $500	Additional Users: $500	Additional Users: $500
Other New Resources	Advertising and office supplies $1,250	Advertising and office supplies $1,250	Advertising and office supplies $1,250	Advertising and office supplies $1,250	Advertising and office supplies 1,250
Total New Resources	$17,750	$89,614	$79,614	$79,614	$79,614

***Salary projected at $**52,258**, as per current PSC-CUNY Agreement. The amount is kept constant for five years as it coincides with the last step before longevity. Fringe benefits calculated at 49% of projected salary.**

TABLE 4

Projected Revenues for the Proposed Program *

Revenues	**1st Year 2018-2019 Academic Year**	**2nd Year 2019-2020 Academic Year**	**3rd Year 2020-2021 Academic Year**	**4th Year 2021-2023 Academic Year**	**5th Year 2023-2024 Academic Year**
Tuition Revenue:					
01. From Existing Resources	0	0	0	0	0
02. From New Sources	$137,836	$271,618	$344,590	$482,426	$644,586
03. Total	$137,836	$271,618	$344,590	$482,426	$644,586
State Revenue:					
04. From Existing Resources	No formula for additional aid	No formula for additional aid	No formula for additional aid	No formula for additional aid	No formula for additional aid
05. From New Sources	0	0	0	0	0
06. Total	0	0	0	0	0
Grand Total:					
07. From New Sources	$137,836	$271,618	$344,590	$482,426	$644,586
TOTAL	$137,836	$271,618	$344,590	$482,426	$644,586

***Formula for per student tuition revenue: number of matriculated full-time students *x* $4,054 per semester tuition and fees for NYS residents. Revenues are likely to be higher since some students will be out-of-state or international.**

6. Evaluation

A. Internal Evaluation

Currently, the Health Sciences Department has a rigorous system for assessing and monitoring program outcomes. The proposed Human Performance and Fitness master's degree program will become another component in the Department's ongoing assessment plan. The following are the evaluation strategies that will be used to assess the proposed Human Performance and Fitness program:

Student Outcomes

It is essential to ensure that students are achieving high standards of learning in the program. The following tools will be employed to evaluate whether these standards are being met: individual course-based evaluations; grade point averages; and theses/capstone projects.

Course-based Evaluations

Faculty will evaluate students' performance based on the pre-determined objectives of each course. Methods of evaluation will include examinations, projects, presentations, etc., which will be specified in the course syllabi. Course methods will be reviewed each semester to ensure that students are achieving the desired mastery of knowledge, and relevant changes will be made based on instructor insights and student feedback from the course/instructor assessments.

Grade Point Average

All students enrolled in the Human Performance and Fitness master's degree program will be required to maintain an overall 3.0 (B) grade point average (GPA) to maintain active status in the program. The program director will be responsible for ensuring that students and intervening with those students who are in danger of falling below the minimum GPA requirement.

Thesis/Capstone Project

Students will be required to complete either a thesis or capstone project for successful completion of the program. Students must receive a B or higher grade on this requirement for graduation. Students will act in collaboration with their mentor/faculty advisor to choose an appropriate problem to research and propose a strategy to study the problem. The ability to successfully carry out such a research-oriented endeavor will display competency in the application of the knowledge, skills and dispositions acquired throughout their coursework.

Program Graduates

In the last semester prior to graduation, students in the Human Performance and Fitness program will be asked to complete an exit survey that assesses their overall experience in the program, from initial application to the filing for graduation. Suggestions for improving the academic, social, and experienced-based components of the program will be solicited from each student. Collected information and feedback will be shared with the relevant offices (e.g., graduate admissions, academic support, academic departments, etc.) to facilitate continuous program and operations improvement. In addition, we will attempt to follow up with student career achievements over time. This will entail sending student's regular emails to ask about their career trajectory. The information will be entered into a spreadsheet and the faculty will assess to determine whether needs are being met and/or if other opportunities warrant revisions/additions to program curriculum.

Faculty Performance
Faculty will be evaluated according to a three-tier process that includes: 1) an annual administrative evaluation by the department chair of the individual's scholarly activities and overall contributions to the department, the school, and the college; 2) peer evaluation of teaching; and 3) student course and teaching evaluations.

Administrative Evaluation
Each year, faculty members are required to submit an updated CV comprising their scholarly achievements (publications, grant activity, presentations, etc) to a data management site (Digital Measures). Moreover, untenured faculty undergo an annual evaluation meeting with the department chair that entails a review of their CV along with plans for new research and grants. Part of the chair's role in the process is to support the untenured faculty in their quest to conduct innovative research that furthers their role as a leader-educator at the college. The chair also evaluates the faculty member on three areas of service: college-wide service, school-wide service, and department-wide service. If the faculty member is lacking in any of these areas, the chair makes recommendations for specific committee work and/or projects for the member to explore.

Peer Evaluation
Each semester, untenured full-time and all part-time faculty members are observed by a peer and evaluated for their teaching competency. The process involves the peer sitting in on a class and providing written commentary on the teaching performance of the instructor, including an assessment of the instructor's strengths and weaknesses. The instructor is then provided with a copy of the written report and given an opportunity to discuss the observations, ask follow up questions, and raise any perceived issues with the report. This collaborative effort provides a systematic means to foster ongoing improvements in education in the program.

Course and Instructor Evaluation
Each semester, students enrolled in the Human Performance and Fitness master's degree program will be afforded the opportunity to complete a course/instructor assessment through the Student Evaluation of Teaching and Learning (SETL) online survey. This survey provides quantifiable data based on a Likert-type scale, allowing objective comparisons based on mean scores. The results of these evaluations will be tabulated and then shared with the dean, department chair, and faculty member. Faculty strengths and weaknesses, as well as suggestions for improvement, will be discussed between the department chair and faculty member during the annual evaluation meeting. Appropriate professional development plans will be created based on mutual agreement between the chair and faculty members.

B. External Evaluation

(Please see Appendix B for the full CV of the external reviewer; Appendix C for the completed program review and; Appendix D for our response to the review.)

Appendix A

Courses and Syllabi in Human Performance and Fitness

EXS 501 Physical Activity, Exercise and Fitness. *3 hours, 3 credits.* Exploration of the role of physical activity and exercise in the development and maintenance of health and fitness. Guidelines for physical activity and exercise in relation to health benefits are examined across the entire lifespan (infancy, childhood and adolescence, adulthood, and older ages), with consideration to the broader implications of their impact on local and global challenges.

EXS 502 Advanced Exercise Physiology. *3 hours, 3 credits.* Human anatomy and physiology as related to physical activity, exercise, and work. Study of the musculoskeletal, endocrine, cardiovascular, and pulmonary systems; bioenergetics; and body composition, anatomy and physiology of aging, and health-related benefits.

EXS 503 Advanced Research Methods in Exercise Science: *3 hours, 3 credits.* Concepts of research, statistics and evaluation in exercise science. Techniques of measurement and methods of analyzing and interpreting data.

EXS 504 Advanced Exercise Testing and Prescription. *3 hours, 3 credits.* Principles of fitness and the development of exercise programs to enhance health and/or human performance in a variety of settings. Methods of evaluating physiological adaptation to exercise, using laboratory and field experiences.

EXS 505 Advanced Sports Nutrition. *3 hours, 3 credits.* Nutritional and metabolic requirements of physical activity. The health and well-being benefits of an optimal diet-exercise regimen for physical activity, exercise, and sport participation will be emphasized.

EXS 506 Applied Training Methodologies. *3 hours, 3 credits.* Applications of strength and conditioning theories and training principles including fitness testing, protocol design and goal assessment to clients in diverse exercise and fitness settings.

EXS 615: Advanced Kinesiology and Biomechanics. Study and application of anatomic and mechanical principles of human movement.

EXS 616: Advanced Motor Learning and Performance. Effects of psychological, social maturational, and neurophysiological factors on the learning and performance of movement patterns.

EXS 626: Fitness Management and Marketing. *3 hours, 3 credits.* Management and marketing principles as they relate to budget, facility design, purchasing, scheduling, programming, and personnel issues in the field of exercise science and wellness.

EXS 665: Psychology of Sport. *3 hours, 3 credits.* Theories, concepts, and intervention techniques of sport psychology. Topics covered include motivation theory applied to sport, team dynamics, psychological skills training, the psychology of sport injury, and burnout in sport.

****EXS 680: Special Topics in Exercise Science.** *3 hours, 3 credits.* Examination of various topics in exercise science. Topics to be announced each semester.

EXS 790: Thesis Workshop 1: *3 hours, 3 credits.* Development of competency in effective scientific writing and critical analysis of research.

EXS 791: Thesis Workshop 2: *3 hours, 3 credits.* Design and execution of a publishable research study on an exercise-related topic that demonstrates content expertise

EXS 795: Capstone Project Workshop: *3 hours, 3 credits.*

*****denotes existing course***

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 501
Course Title	Physical Activity, Exercise and Fitness
Description	Exploration of the role of physical activity and exercise in the development and maintenance of health and fitness. Guidelines for physical activity and exercise in relation to health benefits are examined across the entire lifespan (infancy, childhood and adolescence, adulthood, and older ages), with consideration to the broader implications of their impact on local and global challenges.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society

	____ Scientific World

3. **Rationale:**

EXS 501 is the entry-level course for graduate students that provides the basis for the role of exercise in overall health and wellness

4. **Learning Outcomes (By the end of the course students will be expected to):**

- Interpret relationship between physical activity, exercise, fitness and health
- Articulate physical activity recommendations and levels
- Display an understanding of physical activity behavior (and experience of specialist measurement methods)
- Demonstrate competence in assessment of health related fitness (and experience of specialist measurement methods)
- Demonstrate competence in assessment of body composition (and experience of specialist measurement methods)
- Discuss nuances of the psychology of physical activity and health
- Describe physical activity, exercise, fitness and health issues in individuals aged 0-18 years
- Describe sedentary behavior
- Articulate determinants of physical activity across the life-span

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 502
Course Title	Advanced Exercise Physiology
Description	Human anatomy and physiology as related to physical activity, exercise, and work. Study of the musculoskeletal, endocrine, cardiovascular, and pulmonary systems; bioenergetics; and body composition, anatomy and physiology of aging, and health-related benefits.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**

Exercise physiology is a foundational course in exercise science and an understanding of its nuances is essential to optimizing exercise prescription.

4. **Learning Outcomes (By the end of the course students will be expected to):**

- Display an understanding of concepts and theories of exercise physiology, with an emphasis on skeletal muscle and exercise metabolism
- Critically interpret and discuss research related to exercise physiology and its application to exercise performance
- Articulate viewpoints related to exercise physiology, and support these viewpoints based on current evidence
- Apply theoretical concepts in exercise physiology to practical situations
- Demonstrate the ability to critically review current research and translate findings to topics discussed in class.

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 503
Course Title	Advanced Research Methods in Exercise Science
Description	Concepts of research and evaluation in exercise science. Techniques of measurement and methods of analyzing and interpreting data.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**

An understanding of research and its application is essential to being an evidence-based fitness professional. Moreover, the master's thesis and final project, one of which is required for successful completion of the program, involves extensive research capabilities.

4. **Learning Outcomes (By the end of the course students will be expected to):**

- Display an ability to critically evaluate research including: a) identifying good research questions, b) locating and using appropriate literature sources, c) recognizing strengths and weaknesses of different experimental designs, and d) critiquing research studies
- Demonstrate an ability to thoroughly review the literature on a given topic in exercise science
- Develop the methods for data collection and statistical analysis for a given topic in exercise science
- Display competency in applying the proper statistical approaches to different research designs
- Discuss ethical issues associated with the research process
- Describe the peer review process for manuscript publication.
- Plan and prepare a research proposal

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 504
Course Title	Advanced Exercise Testing and Prescription
Description	Principles of fitness and the development of exercise programs to enhance health and/or human performance in a variety of settings. Methods of evaluating physiological adaptation to exercise, using laboratory and field experiences.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**

Exercise testing and prescription is a foundational course in exercise science and an understanding of its nuances is essential to safe and effective program design.

4. **Learning Outcomes (By the end of the course students will be expected to):**

- Demonstrate an understanding of the importance of physical activity and exercise to the health and well-being of both a healthy and a diseased population
- Perform a risk stratification assessment and use the assessment to guide further exercise and exercise testing recommendations
- Conduct assessments of cardiorespiratory endurance, muscular strength and endurance, body composition, balance, and flexibility
- Interpret the results from exercise tests and apply them to program design

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 505
Course Title	Advanced Sports Nutrition
Description	Nutritional and metabolic requirements of physical activity. The health and well-being benefits of an optimal diet-exercise regimen for physical activity, exercise, and sport participation will be emphasized.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**

An understanding of nutrition is essential to exercise performance and adaptations.

4. **Learning Outcomes (By the end of the course students will be expected to):**
   - Describe the nutritional requirements and their rationale for different sports and forms of exercise
   - Describe the biochemistry of nutrients during exercise and sports performance
   - Evaluate and discuss the current literature in sports nutrition
   - Demonstrate a working knowledge of nutritional software
   - Display an ability to critique fad diets as they relate to body composition and exercise performance
   - Describe the benefits and risks of ergogenic aids

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 506
Course Title	Applied Training Methodologies
Description	Applications of strength and conditioning theories and training principles including fitness testing, protocol design and goal assessment to clients in diverse exercise and fitness settings.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**
Training methods form the core of how exercise is applied in practical settings. An understanding of the nuances is essential to optimizing performance and adaptations.

4. **Learning Outcomes (By the end of the course students will be expected to):**

- Apply scientific knowledge to train athletes and clients for the primary goals of improving athletic performance and fitness.
- Critically interpret and discuss research related to training methods for optimal exercise-related performance and injury prevention
- Demonstrate an ability to conduct sport-specific testing sessions.
- Display an understanding of periodization models and their application to exercise programming for sports performance
- Demonstrate an ability to design and implement safe and effective strength and conditioning and personal training programs to a variety of populations.

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 615
Course Title	Advanced Kinesiology and Biomechanics
Description	Study and application of anatomic and mechanical principles of human movement.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**
An understanding of human kinematics and kinetics is important for optimizing exercise performance and reducing injury risk.

4. **Learning Outcomes (By the end of the course students will be expected to):**
- Display an understanding of the planes of motion and their relevance to exercise program design
- Identify the relationship between anatomical structure, physiological function, and mechanical principles as they relate to the performance of basic and complex movement patterns.
- Demonstrate an ability to identify the primary muscles and stabilizers involved in performance of various exercises
- Observe and analyze kinematics and kinetics to critically evaluate performance in terms of efficient human movement
- Critically interpret and discuss research related to biomechanics and its application to exercise performance

5. **Date of Departmental Approval:** 12/6/18

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 616
Course Title	Advanced Motor Learning and Performance
Description	Effects of psychological, social maturational, and neurophysiological factors on the learning and performance of movement patterns
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**
The ability to teach a skill is central to a fitness professional's job and understanding the processes related to motor learning facilitate optimal instruction.

4. **Learning Outcomes (By the end of the course students will be expected to):**
- Critique research of motor learning using theoretical and applied knowledge
- Demonstrate an understanding of how each level of the central nervous system contributes to motor control and how the levels work cooperatively to carry out coordinated human movement
- Interpret and apply research findings on motor learning to a variety of disciplines within exercise science
- Demonstrate the knowledge and an understanding of essential theories and scientific applications of motor control and neural mechanisms
- Discuss how specificity of learning affects skill acquisition
- Display an ability to employ different motor learning strategies to optimize skill acquisition based on individual preferences and abilities across a wide variety of populations

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
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DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 626
Course Title	Fitness Management and Marketing
Description	Management and marketing principles as they relate to budget, facility design, purchasing, scheduling, programming, and personnel issues in the field of exercise science and wellness.
Pre/ Co Requisites	
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression

	____ Individual and Society ____ Scientific World

3. **Rationale:**
Many fitness professionals seek to open their own fitness-related business and understanding how to manage and market the business is essential for its success.

4. **Learning Outcomes (By the end of the course students will be expected to):**
- Demonstrate a knowledge of theories in fitness management.
- Compare and contrast management concepts in various fitness settings (e.g., corporate, commercial, hospital-based, community)
- Demonstrate an understanding of the processes involved in applied strategic planning
- Demonstrate an understanding of fitness personnel management
- Describe steps and key considerations involved in fitness facility design
- Describe the process required in the selection, purchase, and maintenance of equipment for fitness facilities
- Demonstrate an understanding of basic marketing principles and accounting terminology
- Describe the essentials of risk management planning

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
OF THE
CITY UNIVERSITY OF NEW YORK

DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 665
Course Title	Psychology of Sport
Description	Theories, concepts, and intervention techniques of sport psychology. Topics covered include motivation theory applied to sport, team dynamics, psychological skills training, the psychology of sport injury, and burnout in sport.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**
The psychological aspects of sport can have a major influence on performance; as such, practitioners who work with athletes must be aware of the underlying psychological factors and interventions that can be employed in this regard.

4. **Learning Outcomes (By the end of the course students will be expected to):**
- Identify and explain major theoretical frameworks used in sport psychology research.
- Describe causal mechanisms of the major psychological theories that have been employed to study human behavior in the context of sport.
- Demonstrate an ability to apply theoretical knowledge to encounter challenges commonly associated with sport and physical activity.
- Critically evaluate social and psychological research and discuss its application to practical settings.
- Discuss appropriate intervention strategies for sport performance enhancement.

5. **Date of Departmental Approval:** 12/6/17

LEHMAN COLLEGE
OF THE
CITY UNIVERSITY OF NEW YORK

DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

2.

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 790
Course Title	Thesis Workshop 1
Description	Development of competency in effective scientific writing and critical analysis of research.
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**

The ability to write effectively in a scientific manner is essential to completion of the thesis option in the Master of Science/Human Performance and Fitness program.

4. **Learning Outcomes (By the end of the course students will be expected to):**

- Articulate research objectives in a clear, concise, scholarly manner
- Formulate and write a research proposal
- Effectively record data and experiments so that others can understand them in a manner that forms the basis of a thesis
- Provide and respond to critical feedback on writing assignments
- Discuss new ways to make scientific information understandable to scientists and their peers.

5. **Date of Departmental Approval:** 3/8/18

LEHMAN COLLEGE
OF THE
CITY UNIVERSITY OF NEW YORK

DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

2.

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 791
Course Title	Thesis Workshop 2
Description	Design and execution of a publishable research study on an exercise-related topic that demonstrates content expertise
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**

Completion of a research study is required for the thesis option in the Master of Science/Human Performance and Fitness program.

4. **Learning Outcomes (By the end of the course students will be expected to):**
   - Navigate the online IRB process and produce a proposal consistent with IRB guidelines.
   - Analyze data using appropriate measures and draw relevant conclusions from the findings.
   - Use a bibliographic reference manager in a manner consistent with publication in recognized peer-reviewed journals.
   - Narrate the research process clearly in the form of a formal multi-chapter master's thesis manuscript, structured according to the guidelines set forth by the Human Performance and Fitness program.
   - Describe and discuss research clearly and succinctly, in written and oral forms, to faculty and mentors.

5. **Date of Departmental Approval:** 3/8/18

LEHMAN COLLEGE
OF THE
CITY UNIVERSITY OF NEW YORK

DEPARTMENT OF HEALTH SCIENCES

CURRICULUM CHANGE

1. **Type of change:** New Course

2.

Department(s)	Health Sciences
Career	[ ] Undergraduate [X] Graduate
Academic Level	[X] Regular [ ] Compensatory [ ] Developmental [ ] Remedial
Subject Area	Human Performance and Fitness
Course Prefix & Number	EXS 795
Course Title	Capstone Project Workshop
Description	Design and execution of a publishable narrative or systematic review on an exercise-related topic that demonstrates a thorough understanding of the literature
Pre/ Co Requisites	Departmental Permission
Credits	3
Hours	3
Liberal Arts	[ ] Yes [X] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	N/A
General Education Component	X Not Applicable ____ Required ____ English Composition ____ Mathematics ____ Science ____ Flexible ____ World Cultures ____ US Experience in its Diversity ____ Creative Expression ____ Individual and Society ____ Scientific World

3. **Rationale:**

Completion of a capstone project is required for the capstone option in the Master of Science/Human Performance and Fitness program..

4. **Learning Outcomes (By the end of the course students will be expected to):**

- Articulate research objectives in a clear, concise, scholarly manner
- Formulate and write a research proposal
- Provide and respond to critical feedback on writing assignments
- Discuss new ways to make scientific information understandable to scientists and their peers.
- Analyze data using appropriate measures and draw relevant conclusions from the findings.
- Use a bibliographic reference manager in a manner consistent with publication in recognized peer-reviewed journals.
- Carry out a thorough literature review on an approved topic of choice
- Produce a publishable paper on the topic either as a narrative or systematic review or meta-analysis.

5. **Date of Departmental Approval:** 3/8/18

APPENDIX B

External Reviewer CV

MICHAEL G. MILLER, PhD, EdD, AT, ATC, CSCS,*D, TSAC-F*D, NSCA-CPT*D, FNATA, FNSCA

CURRENT ADDRESS

Home:	Work:
2915 Valley Glenn Circle	Western Michigan University
Kalamazoo, MI 49004	Department of HPHE
(269) 599-2715	1903 West Michigan Avenue
	Kalamazoo, MI 49008-5426
	(269) 387-2728
	michael.g.miller@wmich.edu

EDUCATION

2011	**Western Michigan University** Kalamazoo, MI College of Education and Human Development	Doctor of Philosophy: Evaluation, Measurement, and Research
2010	**Western Michigan University** Kalamazoo, MI College of Education and Human Development	Master of Arts: Evaluation, Measurement, and Research
1996	**West Virginia University** Morgantown, West Virginia School of Physical Education	Doctor of Education: Physical Education Teacher Education Specialization in Exercise Physiology
1995	**West Virginia University** Morgantown, West Virginia School of Medicine	Master of Science: Exercise Physiology
1991	**West Virginia University** Morgantown, West Virginia School of Physical Education	Master of Science: Physical Education Emphasis in Athletic Training
1990	**California University of Pa.** California, Pennsylvania School of Education	Bachelor of Science: Athletic Training

UNIVERSITY TEACHING EXPERIENCE

2002-current **Western Michigan University**, Department of HPHE
Professor/Graduate Athletic Training Program Director

- Sports Trauma Rehab
- Sports Trauma Evaluation
- Aquatic Therapy
- Sports Trauma Modalities
- Gross Anatomy
- Orientation and Emergency Management
- Athletic Training for Coaches
- Foundations of Sports Injuries
- Pharmacology for Sports (on-line)
- Thesis and Independent Research
- Readings
- Strength Training and Conditioning
- Muscular Strength and Endurance
- Analytical Techniques

2015-current **Rocky Mountain University of Health Professions**
Concentration Tract Director - Doctor of Science in Human Sports Performance

- Direct all aspects of the DSc program
- Approve all dissertation topics
- Serve on DSc dissertation committees
- Recruit adjunct faculty

1999 **–** 2001 **Ohio University**, School of Recreation and Sport Sciences
Assistant Professor/Athletic Training Undergraduate Program Director

- Seminar: Sports Medicine
- Prevention/Management of Athletic Injuries
- Therapeutic Exercise
- Therapeutic Modalities
- Recognition/Evaluation of Athletic Injuries
- Recognition/Evaluation of Athletic Injuries 2
- Athletic Training Administration
- Exercise Prescription
- Emergency Management
- Research Methods

1998 - 1999 **West Virginia Wesleyan College**, Department of Health and Physical Education
Assistant Professor/Chairperson

- Elementary Rhythm and Movement
- PE Majors 2
- PE Majors 3
- Exercise and Weight Control
- First Aid and Safety
- Community Health
- PE Majors I
- Strength and Conditioning
- Tumbling and Gymnastics

1996 - 1998 **University of North Florida**, College of Health, Department of Health Science
Assistant Professor of Sports Medicine-Athletic Training

- Gross Anatomy (Physical Therapy and Athletic Training Programs)
- Principles of Strength and Conditioning
- Biomechanics
- Orthopedic and Injury Assessment of the Upper Extremity
- Athletic Training Administration
- Orthopedic Taping and Bracing
- Observation and Practicum in Athletic Training
- Lifestyle Modification
- Exercise Physiology -Section of Cardiopulmonary Physical Therapy

1993 - 1996 **West Virginia University**, School of Physical Education
Instructor (one year)/Doctoral Graduate Assistant (two years)

- Sports Injury Control and Management
- Therapeutic Modalities
- Orthopedic Assessment
- Gross Anatomy
- Exercise Physiology
- Kinesiology
- Methodology in Physical Education
- Physical Education Teaching Practicum
- Adaptive Physical Education
- Student Teacher Supervisor
- Basketball and Billiards
- Volleyball and Golf
- Badminton and Racquetball

1992 - 1993 **Southern Connecticut State University**, Department of Physical Education
Assistant Professor/Athletic Trainer (One year position)

- Therapeutic Modalities
- Care and Prevention

- Standard First Aid and Community CPR
- Basketball Skills
- Weight Training and Conditioning

1991 - 1992 **Lock Haven University**, Department of Health Sciences
Instructor/Athletic Trainer (One year position)

- Anatomy and Physiology with cat dissection
- Human Anatomy
- Care and Prevention of Athletic Injuries
- Safety Concepts/First Aid

ATHLETIC TRAINING EXPERIENCE

2010 Athletic Trainer – USTA 18 & 16 National Tennis Tournament – Kalamazoo College

2007-2008 Athletic Trainer – USTA 18 & 16 National Tennis Tournament – Kalamazoo College

2003 Athletic Trainer – USTA 18 & 16 National Tennis Tournament – Kalamazoo College

2002 Assistant Athletic Trainer – Kalamazoo Area High School Football (Friday night home games at various high schools)

2002 Athletic Trainer – Vicksburg JV Football

2002 Athletic Trainer USTA 18 & 16 National Tennis Tournament – Kalamazoo College

2002 Athletic Trainer – Kalamazoo Invitational Soccer Shootout, June 23

1997 Athletic Training coverage: Trinity Christian High School Football
University of North Florida, Volleyball Tournaments
Gate River Run, Jacksonville, Florida

1996 Kid's Café Assistant Director/Medical Director, Jacksonville, Florida

1994 Head football athletic trainer, South Junior High School, Morgantown, WV

1993 - 1994 Assistant Athletic Trainer, West Virginia University
Responsible for men's soccer and non-revenue sports
Supervised undergraduate and graduate athletic trainers

1992 - 1993 Assistant Athletic Trainer, Southern Connecticut State University
Responsible for football, volleyball, men's gymnastics, and men's soccer teams
Supervised and advised student athletic trainers

1991 - 1992 Assistant Athletic Trainer, Lock Haven University
Responsible for football, field hockey, lacrosse, softball, basketball, and track teams
Supervised and advised student athletic trainers

PROFESSIONAL MEMBERSHIPS

2008 - 2009 American Educational Research Association

2011-2016 American Evaluation Association

2007- 2011 National Scholars Honor Society

2006 – currentAquatic Exercise Association

2005- 2009 International Council for Health, Physical Education, Recreation, Sport & Dance (ICHPER-SD)

2002 - current Michigan Athletic Trainers' Society

2002 - 2011 American College of Sports Medicine

1992 - current National Strength and Conditioning Association

1987 - current National Athletic Trainers' Association

PROFESSIONAL CERTIFICATIONS

Michigan Licensed Athletic Trainer

NSCA Certified Strength and Conditioning Specialist with Distinction (CSCS*D)

Tactical Strength and Conditioning- Facilitator with Distinction (TSAC-F*D)

National Strength and Conditioning Association – Certified Personal Trainer with Distinction (NSCA-CPT*D)

BOC Certified Athletic Trainer

Commonwealth of Pennsylvania - Class A Certification

Aquatic Fitness Professional Certification (AFPC)

Facial Movement Taping Level I and II (FMT I/II)

Functional Movement System (FMS) – Level 1

Y-Balance certified

American Red Cross CPR/AED for the Professional Rescuer & First Aid/CPR Instructor

NPI - 1497802086

UNIVERSITY SERVICE

Western Michigan University

2017	American Association of University Professors (AAUP) Negotiation team member
2016-17	Athletic Training Faculty Search Committee Chair
2015	WMU Research and Creative Activities Poster and Performance Day - Judge
2014-2016	College of Education and Human Development Dean's Advisory Council
2014	Exercise Science Faculty Search Committee Member
2014-current	University HSIRB Committee Member
2011-current	College of Education and Human Development Promotion Committee
2012-2015	HPHE Policy Committee Member
2011-2015	WMU Graduate Studies Council Committee member
2011-2015	WMU Physician Assistant Program Musculoskeletal Module Facilitator
2010	WMU Research and Creative Activities Poster Judge
2010	Undergraduate Athletic Training Search Committee Chair
2008 – current	WMU FRACAA grant review committee
2007 – 2014	HPHE Personnel Committee Member
2007 – 2010	Faculty Senate Campus Planning and Finance Committee – Vice Chair
2007 – 2012	Chair, Academic Subcommittee – Inter-collegiate Athletics
2006 - 2012	Faculty Senate Library Committee Member
2006	First year Experience (FYE) Instructor
2005- 2012	Western Michigan University Athletic Board Member
2005 - 2007	American Association of University Professors (AAUP) Contract Administrator
2005	Undergraduate Athletic Training Search Committee Member
2004 - 2007	Graduate Research and Creative Scholar Award Selection Committee
2003 – 2007	HPHE Department AAUP Representative
2003	Mentoring Healthy Habits - Mentor

2003 Exercise Science Search Committee Member
2002 – 2007 HPHE Policy Committee Member
2002 - 2006 HPHE Graduate Council
2002 – current HPHE Exercise Science/Athletic Training Core Group Member

Ohio University
2001 Pew Higher Education Roundtable – Selected Member
2001 Ohio University's Colloquium on Teaching – Selected Member
2001 Ohio Teaching Enhancement Program – Selected Member
2001 Exercise Physiology Search Committee Member
2000 - 2001 College of Health and Human Services Policies Committee Member
1999 - 2001 Enhancement Committee Member - Chair

West Virginia Wesleyan College
1999 Nutrition Planning Committee Member
1998 – 1999 Chairperson, Department of Health and Physical Education

University of North Florida
1997 - 1998 University Tuition Exchange Committee Member
University Osprey Card Committee Member
University Technology Planning Committee Member
Physical Therapy Anatomy Professor Search Committee Member
1996 - 1998 Chair, Technology Committee, College of Health
1997 Distinguished Professor Search Committee Member
1996 - 1997 Chair, Faculty and Staff Affairs, College of Health

Lock Haven University
1992 Athletic Training Search Committee Member

GRANTS (funded)

2009 Binkley H, **Miler MG**, Faignebaum, A, Tolbert, T. Care to Play . Center for Physical Activity and Health in Youth. Middle Tennessee State University. $10,300

2009 **Miller MG***,* Michael TJ, Bensley R. *CPR for Everyone.*. American Heart Association/ American Red Cross. $104,000

2008 **Miller MG***,* Michael TJ, Bensley R. Development, Administration, and Evaluation of CPR Refreshers . American Heart Association/ American Red Cross. RFP No. 229842. $506,300

2008 Cheatham, C., Standley, R., **Miller, MG**., Michael, T. & Liu, Y. Effects of High Dose Fish Oil Supplementation on Delayed Onset Muscle Soreness (DOMS) and Inflammatory Markers. *GlaxoSmithKline*. $4,775

2006 **Miller MG** & Berry DC. Great Lakes Athletic Trainers' Association Research Grant. An Investigation of Clinical Instructor/Supervisors Behaviors with Athletic Training Students. $1,200

2006 **Miller MG**. Western Michigan University Faculty Grant (FRACASF). Absorption Characteristics of Ultrasonically Applied Ketoprofen. $7,461

2006 **Miller MG**. Product Grant from IOMED. Provided Iontophoresor and 96 electrodes. $1,800

2005 **Miller MG**. Product Grant from OrthoDX. Provided Electrical Stimulation Unit. $1,500

2004 **Miller MG**. Product Grant from Fitter International. Provided 10 classic balance boards. $300.00

2003 **Miller MG**. Product grant from Rothhammer International, Inc. Provided 5 Sprint Aqua Steps. $500

2003 **Miller MG**. Product Grant from BREG. Provided 6 Turf and Court ankle braces. $150

2003 **Miller MG**. Product grant from Road Runner Sports. Provided 19 pairs of Asics Gel Creed running shoes. $2,000

2003 **Miller MG**. President's Faculty Laptop Initiative. Dell Laptop Computer. $1800

2000 **Miller MG** & Berry DC. Assessment of Athletic Training Student Clinical Behaviors. Ohio University College of Health and Human Services Scholarly Activity Award. $4,838.88

2000 Berry DC & **Miller MG**. Mouthguard Usage for Appalachian High School Athletes. John Houk Research Grant. $500

1998 **Miller MG**. Product grant from PEAK Nutrition. Provided Creatine Monohydrate for a research study. $1,200

1996 Kleiner DM, Holcomb WR, **Miller MG**. (1996). The physiological effects of ankle bracing. McDavid, Chicago, IL; Cramer, Gardner, KS; Mueller, Prairie du Sac, WI; and Body Glove, Charlotte, NC. $3,000

1995 **Miller MG**. Dissertation Research Grant. West Virginia University, $500.00

GRANTS (not funded)

2015 **Miller MG**, Michael TJ, Hanson NJ, Lee S. Examination of Fatigue Resistant Racquet. Wilson Sporting Goods. $63,504.

2011 Mickus M & **Miller MG**. Group Exercise via Videoconferencing for Dementia Caregivers and Care Recipients. US Department of Health and Human Services, National Institute of Health R21. $407,000

2010 Mickus M & **Miller MG**. Reducing Loneliness in Homebound Elders using Videoconferenced Exercise Groups. US Department of Health and Human Services, National Institute of Health R21. $409,750

2009 **Miller MG**, Cheatham CC, Binkley H, Tolbert, T. Surveillance of Adolescent Football Experience (SAFE). NFL Charities Medical Grant. $89,000

2008 **Miller MG** & Chase C. The Effects of Aquatic Training on the Fear of Falling in Community Living Older Persons. National Swimming Pool Foundation, $57,600

2008 **Miller MG.** Integration of physiological concepts and technology to enhance undergraduate learning and research in athletic training. National Science Foundation, Course Curriculum Laboratory Instruction, phase 1, $104,000

2004 Wimer J, **Miller MG**, Berry DC. A Surveillance Study of Student Engagement Patterns in Classroom and Clinical Education Settings Using Cellular Telephones with Wireless Internet Access. NATA Research and Education Foundation. $88,117

2002 **Miller MG** & Berry DC. Observational Analysis of Athletic Training Students' Clinical Field Experiences. NATA Research and Education Foundation.

2001 **Miller MG**. Comparisons of Plasma Ketoprofen Absorption Rates Between Phonophoresis and Direct Topical Application. Ohio University Research Committee Grant.

1999 **Miller MG** & Holcomb WR. Conceptual Knowledge Structures of Student Athletic Trainers. NATA Educational Foundation.

1998 Holcomb WR & **Miller MG**. Vastus Medialis Oblique Strength Augmentation with Neuromuscular Electrical Stimulation. NATA Educational Foundation.

FUNDED CONTRACTS

2016 Clinical contracts from 15 High Schools, 1 Community College, 1 Private College for the graduate athletic training program. $308,000.

2015 Clinical contracts from 16 High Schools, 1 Community College, 1 Private College for the graduate athletic training program. $326,600.

2014 Clinical contracts from 16 High Schools, 1 Community College, 1 Private College for the graduate athletic training program. $325,000.

2013 Clinical contracts from 15 High Schools, 1 Community College, 1 Private College for the graduate athletic training program. $306,000.

2012 Clinical contracts from 16 High Schools, 1 Community College, 1 Private College for the graduate athletic training program. $306,000.

2011 Clinical contracts from 17 High Schools, 1 Community College, 1 Private College for the graduate athletic training program. $333,360.

2010 Clinical contracts from 17 High Schools, 1 Community College, 1 Private College for the graduate athletic training program. $306,660.

2009 Clinical contracts from 17 High Schools, 1 Community College, 1 Private College for the graduate athletic training program. $317,360.

2008 Clinical contracts from 16 High Schools and 1 Community College for the graduate athletic training program. $280,200.

2007 Clinical contracts from 14 High Schools and 1 Community College for the graduate athletic training program. $233,200.

2006 Clinical contracts from 14 High Schools and 1 Community College for the graduate athletic training program. $212,200.

2005 Clinical contracts from 16 High Schools, 1 Community College, and 2 at a Private College for the graduate athletic training program. $239,400.

2004 Clinical contracts from 17 High Schools, 1Community College and 2 at a Private College for the graduate athletic training program. $231,400.

2003 Clinical contracts from 14 High Schools, 1 Community College and 2 at a Private College for the graduate athletic training program. $209,100.

2002 Clinical contracts from 14 High Schools, 1 Community College and 2 at a Private College for the graduate athletic training program. $209,100.

PATENT

2008 Mouthguard Wear Strip - provisional patent #61/127,614

PROFESSIONAL SERVICE

2017 NSCA Moderator- Annual Conference

2017 NATA Moderator- Annual Conference

2016-2017 NSCA State Clinic Host Organizer

2016 ATEC Moderator

2015/17 NATA Research and Education Foundation Grant reviewer

2014 NSCA Research Poster Judge. NSCA National Convention, Las Vegas, NV

2011-2014/16 NATA Annual Meeting Convention Proposal Reviewer

2010 NSCA Research Poster Judge. NSCA National Convention, Orlando, FL

2008-current NSCA Abstract Reviewer

2007 Student Research Poster Judge. NSCA National Convention, Atlanta GA

2007/2014 NSCA Grant Reviewer. NSCA

2007 NATA Moderator. Free Communications. NATA National Convention, Anaheim, CA

2005 –2014 NSCA CSCS exam host

2005 BOC Examiner, Alma, Michigan – January 30

2004 BOC Examiner, Alma, Michigan – February 8

2003 NATA Research and Education Foundation Judge; 2003 NATA Clinical Symposia, St. Louis, MO

2002 NATA Research and Education Foundation Undergraduate Poster Judge; 2002 NATA Clinical Symposia, Dallas, TX

2002 BOC Examiner; Alma, Michigan

2002 BOC Examiner; East Lansing, Michigan

2001-2002 Competencies & Proficiencies Committee Member – Subcommittee of the JRC-AT

2001 BOC Examiner; Granville, Ohio

1999 BOC Examiner; Pittsburgh, Pennsylvania

1997 BOC Examiner; Orlando, Florida

1995 Abstract Reviewer, NATA Research and Education Foundation

1996 BOC Examiner; Pittsburgh, Pennsylvania

1996 Guest Examiner, California University of PA Athletic Training Program

1995 BOC Examiner; Pittsburgh, Pennsylvania

1995 Exercise Physiologist, Mountainview Rehabilitation Hospital Aquatic Therapy Program

1995 National Youth Sports Program Medical Director

1990 National Youth Sports Program Medical Director

PROFESSIONAL COMMITTEES

2015-2017 Transition to Practice Workgroup member

2015- current Athletic Training Education Conference (ATEC) committee member

2014-current NATA Education Advancement Committee - chair

2017-current NSCA Board Member- Vice President

2014-current NSCA Board Member

2014-current NATA Executive Committee on Education committee member

2013-current NATA Liaison for the NSCA

2010-2011 NATA 2011 Convention Program Committee

2009-2012 Mid-American Conference (MAC) Cartwright Award Committee

2007 NSCA Strategic Planning Summit Member

2006 – currentCAATE Ethics Committee Member

2006 – 2011 NATA Liaison for the NSCA

2005 – 2007 Strength & Conditioning Subcommittee Chair – Michigan Athletic Trainers' Society

2004 – 2009 National Strength and Conditioning Association (NSCA) Education Committee Chair

2002 - 2006 BOC Task Force on Continuing Education

2002 Kalamazoo County Government, Human Services Department – Physical Activity Health Issue Team Member

2002 – 2008 Professional Education Committee Member – Michigan Athletic Trainers' Society

2002 - 2011 CAATE Site Reviewer

2001- 2013 BOC Home Study Reviewer

2001 - 2009 National Strength and Conditioning Association - Education Committee Member

1998 - 1999 West Virginia State Director for the National Strength and Conditioning Association

EDITORIAL BOARD/JOURNAL REVIEWER

2015-current Co-editor- Sports Medicine special edition- Journal of Strength and Conditioning

2015 Athletic Training Education Journal – Editorial Board Member

2014-current Manuscript Reviewer – Journal of Strength and Conditioning Research

2014 – current Manuscript Reviewer – Athletic Training & Sports Health Care

2005 – 2007 Assistant Editor - ICHPER-SD Research Journal

2002 - 2010 Editorial Review Board Member – The Physical Educator

2002 – current Manuscript Reviewer - Journal of Athletic Training

1997 - 2002 Reviewer - Strength and Conditioning Journal

HONORS/AWARDS

2017 NSCA Fellow
2016 GLATA Educator of the Year
2015 NATA Most Distinguished Athletic Trainer
2014-current Excellence in Discovery, Western Michigan University, OVPR
2012 NATA Fellow
2012-current NSCA Ironman
2008 Bronze Award NSCA Certification Commission
2000 California University of Pennsylvania Athletic Training Program Distinguished Alumnus

PROFESSIONAL PRESENTATIONS

NATIONAL

65) Fox R, Lee S, Weidman C, Michael T, **Miller MG**, Hanson N. (2017). Effect of listening to music during warm-up on Wingate anaerobic test performance. Free Communication/Poster, NSCA National Conference, Las Vegas, NV.

64) Hanson NJ, **Miller MG**, Lothian DD, Miller CL, Michael TJ, Lee S. (2017). Does a performance enhancing mouthguard have the ability to decrease blood lactate and increase power? Free Communication/Poster, NSCA National Conference, Las Vegas, NV.

63) **Miller MG.** (2017). Aquatic Training for the Lower Extremity- Aquatic Training for Developing the Core for Recovery and Sport Enhancement. Feature Presentation. NATA Annual Meeting and Clinical Symposia. Houston, TX.

62) **Miller MG,** Harvatt C, Hirsch K, Holcomb WR. (2017). Network analysis of clinical placement of athletic training students. Free Communication Rapid Fire Poster, NATA Annual Meeting and Clinical Symposia. Houston, TX.

61) **Miller MG**, Dahl WO, Ledwon RW, Sullivan TL, Hanson NJ, Michael TJ, Hatzel B. (2016). Electromyography and force comparison of the quadriceps after application of specialty tapes for muscle activation over time. Free Communication/Poster, NSCA National Conference, New Orleans, LA.

60) **Miller MG**, Boike TS, Mass CJ, Holcomb WR, Hanson NJ, Michael TJ. (2016). The effect of low level laser therapy on delayed onset muscle soreness of the biceps brachii. Free Communication/Poster, NSCA National Conference, New Orleans, LA.

59) Holcomb WR, Bremner CB, Brown CD, **Miller MG**. (2015). Assessment of Patient Comfort During NMES-Induced Quadriceps Contractions at Two Knee Joint Angles. Free Communication Rapid Fire Poster, NATA Annual Meeting and Clinical Symposia. St. Louis, MO.

58) Hanson NJ, Buckworth J, **Miller MG**, Michael TJ. (2015). Teleoanticipation and effects of sex differences on pacing strategy. Free Communication/Poster, NSCA National Conference, Orlando, FL.

57) **Miller MG** (2015). Aquatic Strength and Conditioning Workout. Hands-on Track. NSCA National Conference, Orlando, FL.

56) Holcomb WR, Bremner CB, Brown CD, **Miller MG**. (2015). Assessment of the learning effect with repeated isometric strength testing at two knee flexion angles. Free Communication/Poster, NSCA National Conference, Orlando, FL.

55) **Miller MG**, Depudyt T, Holcomb WR, Humason M, Prater D. (2015). The effects of specialty tape on balance of the lower leg and ankle. Free Communication/Poster, NSCA National Conference, Orlando, FL.

54) Kolean J, Jones S, **Miller MG**, Holcomb WR, Bremner CB. (2015). Effects of Kinesio Tape on blood flow in the biceps brachii. Free Communication/Poster, NSCA National Conference, Orlando, FL.

53) **Miller MG**, Holcomb WR, Reuter B. (2015). Hot topics in sports medicine: Roundtable discussion. Sports Medicine SIG, NSCA National Conference, Orlando, FL.

52) **Miller MG**, Burningham D, Bratton W, Hatzel B, Holcomb WR, Bremner C. (2014). Effect of Kinesio® Taping for Muscle Inhibition on Bioelectrical Activity of the Middle Deltoid. Poster Presentation, NSCA National Conference, Las Vegas, NV.

51) Troiano J, Larsen C, Ramirez R, **Miller MG**, Holcomb WR. (2013). Effects of PNF Stretching Following Crushed Ice Versus Wetted Ice on Hamstring Flexibility. Poster Presentation, NSCA National Conference, Las Vegas, NV.

50) Krasinski D, Thrasher A, **Miller MG**, Holcomb WR. (2013). Effects of Applied Pressure on Intramuscular Temperature During Ultrasound Treatments, Poster presentation: Therapeutic Intervention, NATA Annual Meeting and Clinical Symposium. Las Vegas, NV.

49) Cavett H, **Miller MG**, Cheatham CC, Holcomb WR. (2011). Effects of Premodulated Electrical Stimulation on Muscular Blood Flow in the Gastrocnemius. Poster presentation , NATA Annual Meeting and Clinical Symposium. New Orleans, LA.

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EVALUATION EXPERIENCE

2011- 2015 Research and Evaluation Consultant for iEval, Battle Creek, MI

APPENDIX C

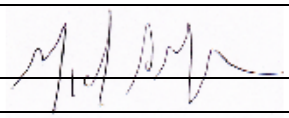
External Evaluation Report

The **THE STATE EDUCATION DEPARTMENT** / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

Office of College and University Evaluation

Evaluation Report Form for Program Proposals

Please refer to the Department's guidance on external reviews for information about when external reviews are required and the selection of external reviewers.

Institution:	Lehman College
Program title:	Human Performance and Fitness
Degree:	Master of Science (MS)
Date of evaluation:	1/18/18
External Reviewer Name *(please print)*:	Michael G. Miller
External Reviewer Title and Institution:	Professor – Western Michigan University
External Reviewer Signature:	

I. Program

1. Assess program purpose, structure, and requirements as well as formal mechanisms for program administration and monitoring.

The proposed Master degree program targets the physical fitness/activity needs of the general public and also fulfills a role to educated and advance scholarship in the prosed area. The degree also fills a need for a graduate degree program in the region, specifically the Bronx area where educational opportunities are

difficult to obtain. The degree will enhance educational and scholarship opportunities of students and faculty and fit well with the department's overall strategic priorities. Additionally, the quality of faculty already housed within the department, and their national/international recognition will be an asset for student recruitment. The curriculum has the necessary components to meet the advanced educational need as proposed and the credits required for graduation falls within standard ranges of similar programs throughout the country.
2. Comment on the special focus of this program, if any, as it relates to the discipline.
The proposed Master degree in Human Performance and Fitness will concentrate on advancing knowledge and experiences in fitness/conditioning/scholarship and allow students who matriculate through the program to find meaningful employment opportunities. The program was developed based upon the requests of current undergraduate students seeking to further advance their education plus the trends of society and emphasis on exercise and employment prospects as defined by the U.S. Dept of Labor and Statistics. Upon examining program credits, the number advertised within and then calculated via course sequencing do not match, apparently with the total thesis credit hour requirement. Additionally, 12 credits for thesis (if this is the requirement) is extreme for master level, and usually associated with dissertation credit requirements.
3. Comment on the plans and expectations for continuing program development and self-assessment.
The evaluation plan covers the main aspects to determine program quality and effectiveness. However, other potential evaluation strategies may be including employment type/location data of students who graduate within 6 months and implementing employer evaluating of past students and recommendations for program improvement based upon job duties and responsibilities.
4. Assess available support from related programs.
Proposal appears to be a self-funding model, with initial support via the dept with the hopes that the program supports itself in years to come. Developing partnerships with local businesses or corporations may benefit the program for capital expenses, sponsorships of travel and research, and other expense items that often appear.
5. What is the evidence of **need** and **demand** for the program locally, in the State, and in the field at large? What is the extent of occupational demand for graduates? What is the evidence that demand will continue?
The need for this degree and program is evident in your geographic location, with no college/university offering such program and other master degree programs similar in nature are several hours of commute. I would like to know the existence of other "similar" titled and degree programs in the country, instead

of just comparing to exercise science or exercise physiology. I would also like to know how enrollment numbers were tabulated/justified to determine the program feasibility? Moreover, examples of potential employment placements and opportunities and how this would be different and more easily obtained compared to someone having an undergraduate degree would be useful.

II. Faculty
6. Evaluate the faculty, individually and collectively, in regard to training, experience, research and publication, professional service, and recognition in the field.
Currently, 3 faculty have been identified to oversee the program, all of whom are already employed at Lehman College. These faculty have a strong publication record and notoriety in the proposed degree area. Their leadership, knowledge of the proposed curriculum content and research acumen will enhance the educational opportunities of the students and more importantly, serve as mentors and conduits for future student employment. This area is the strongest component of the proposal and will lead and assist in recruiting highly qualified and more importantly, motivated students to enroll.
7. Assess the faculty in terms of **size** and **qualifications.** What are plans for future staffing?
A 4th faculty member to assist in the implementation of the program has been solicited. As such, beginning operational processes (teaching/research) appears to be overloaded on the current faculty, that have FTE already within the department. As the program comes to fruition, overload will be required and or release time and hiring of adjuncts to teach undergraduate courses or supervise laboratory projects/activities will be required. This was not identified in the current proposed budget. With an undergraduate program consisting of 300 students plus the anticipation of 100 future students at the graduate level (400 in total), even with the additional hire, a 1:100 faculty/student ratio will result in low quality and hardship when conducting research. The graduate degree proposed, with the number of students wanted, will require more than 1 additional faculty. Programs of that size (at the graduate level) often have 4-5 faculty, not counting faculty at the undergraduate level.
8. Evaluate credentials and involvement of **adjunct** and **support faculty.**
Limited information is provided to adequately answer this section. However, as mentioned previously, adjunct faculty/support faculty will be required to take on a larger role in the undergraduate degree to allow the qualified faculty identified in this proposal to be successful.
III. Resources
9. Comment on the adequacy of physical **resources** and **facilities**, e.g., library, computer, and laboratory facilities; practica and internship sites; and support services for the program, including use of resources outside the institution.
The library, with its current resources and ability of faculty and students to access information remotely is adequate. The courses in exercise testing and

prescription, advanced training methodologies, and biomechanics may require additional resources in order to ensure students are progressing in their knowledge and practical experiences beyond the undergraduate level. No internship/practical sites were proposed for students, but if this area becomes part of the program, resources may be required for student quality experiences. The additional hire of the proposed 1 faculty (and perhaps more) will require start-up packages, which is turn adds to the overall budget, but at the same time, may be useful in obtaining equipment necessary for the program and offset capital purchases. Funds for student travel to conferences to present research or capstone projects should be considered and integral for promoting Lehman College.

10. What is the **institution's commitment** to the program as demonstrated by the operating budget, faculty salaries, and the number of faculty lines relative to student numbers and workload.

The department and College appear to be vested in this degree and a generous package has been proposed, however, may fall short in terms of faculty required and equipment need for practical and research experiences of students and faculty. A larger initial investment may be required with timely boluses of funds as the program develops over the next 5-6 years.

IV. Summary Comments and Additional Observations

11. Summarize the **major strengths and weaknesses** of the program as proposed with particular attention to feasibility of implementation and appropriateness of objectives for the degree offered. Include any further observations important to the evaluation of this program proposal and provide any recommendations for the proposed program.

Strengths:
1. Qualified faculty with international recognition and research prowess
2. Academic program based upon societal needs and trends that will not dissipate over the years
3. Academic coursework advances undergraduate knowledge in the respective discipline
4. Increase the potential for many students to seek a terminal degree and may lead to Lehman College offer said degree program
5. Credits for program completion within normal realms of all master degree programs

Considerations:
1. More faculty/adjuncts may be required to meet the curricular offering and scholarship opportunities required
2. Processes for a current undergraduate to matriculate into the new master degree program
3. Suggest not concentrating on proposal justification of "increasing knowledge in sport" but for "…exercise and movement activities which includes "sports" coaching, etc"
4. How will educational background/undergraduate degrees related or even not

related be factored into admissions? Especially students in the local area who now want a degree and work in the field
5. Might want to consider a stats course or embed stat concepts within the research methods course. Many PhD programs look for both types of classes for their admissions
6. Consider two options, capstone and thesis (and each one have more specific electives with less options) that will be useful for advancing their careers, for example, a student who wants to become a PhD would benefit from biomechanics as a requirement instead as an elective
7. Any practical or internship requirements?

APPENDIX D

Response to External Review

Program:

Response to: Comment on the special focus of this program, if any, as it relates to the discipline.

- Apparently our wording wasn't clear. The thesis option has 6 credits for the thesis and the capstone option has 3 credits for the capstone, consistent with the credits noted in the curriculum section. We have revised the wording to clarify as follows: *After mapping out a program in advance with the Graduate Program Director, students must complete, with an average of B or better, 33 total credits in the Human Performance and Fitness degree program. All students will be required to take 18 credits in common core courses. Students wishing to pursue the thesis track option will take an additional 9 elective credits plus 6 credits of thesis. Students opting for the capstone track will take an additional 12 elective credits plus 3 credits of capstone*.

Response to: Comment on the plans and expectations for continuing program development and self-assessment.

- We have revised the proposal to include following student career trajectories over time and using this information to determine whether modifications in curriculum are warranted to better serve the students.

Response to: Assess available support from related programs.

- We have amended the proposal to indicate that we will endeavor to develop sponsorships with supplement companies, equipment companies, hospitals, and other organizations to help offset costs for equipment, sponsorships of student travel for conferences and presentations, and other relevant expenses that may arise.

Response to: What is the evidence of **need** and **demand** for the program locally, in the State, and in the field at large? What is the extent of occupational demand for graduates? What is the evidence that demand will continue?

- The projected enrollment is based on the number of inquiries that we have received over the past several years, the marketing efforts that we will pursue, and the anticipated publicity that will be generated from the program's success. We have added text to address this issue.
- We have revised the text to note that there are a number of universities around the country that have degrees specific to Human Performance and Fitness, but that none exist within the greater New York area.
- We have added text to reflect the opportunities available for those who obtain a master's degree in the field.

Faculty:

Response to: Evaluate credentials and involvement of **adjunct** and **support faculty**.

- We have added text to discuss current adjunct roles in the program and hiring of an additional adjunct in the first year has been noted in the budget.

Resources:

Response to: Comment on the adequacy of physical **resources** and **facilities**, e.g., library, computer, and laboratory facilities; practica and internship sites; and support services for the program, including use of resources outside the institution.

- We have consulted with the library staff and feel the resources are sufficient to carry out the program as intended. We have amended the proposal to factor in start-up packages for hired faculty into the budget. We have addressed the potential expenses for student travel as noted in the section above on available support, stating that we will endeavor to cover such outlays by sponsorships from outside organizations. There will not be an internship so the issue raised by the external reviewer would not be relevant in this regard.

Response to: What is the **institution's commitment** to the program as demonstrated by the operating budget, faculty salaries, and the number of faculty lines relative to student numbers and workload.

- The Exercise Science lab has received substantial internal and external funding over the past several years and we now possess a good amount of equipment and resources sufficient to carry out the master's program and provide students with a rich experience. As time goes on we will apply for additional grants to further support the program as needs arise.

Summary Comments and Additional Observations

Response to: More faculty/adjuncts may be required to meet the curricular offering and scholarship opportunities required

- We have added text to reflect that additional faculty may be required to meet the demand of the program, and will be requested as the need arises.

Response to: Processes for a current undergraduate to matriculate into the new master degree program

- We do not feel that current students should receive preferential consideration for entry into the program. As per the suggestion of the external reviewer, we have added text to reflect that undergrad students with a GPA of 3.0 or higher and who have taken >90 credits can take up to 12 credits of graduate classwork and receive credit for these classes at the master's degree level if/when they matriculate into our program.

Response to: Suggest not concentrating on proposal justification of "increasing knowledge in sport" but for "…exercise and movement activities which includes "sports" coaching, etc"

- We have revised the text to reflect the requested change.

Response to: How will educational background/undergraduate degrees related or even not related be factored into admissions? Especially students in the local area who now want a degree and work in the field

- We have revised the proposal to state that prospective students who do not meet the listed requirements can apply for special circumstances and admission will be considered on case-by-case basis.

Response to: Might want to consider a stats course or embed stat concepts within the research methods course. Many PhD programs look for both types of classes for their admissions

- The course in Advanced Research Methods (EXS 603) has a substantial statistics component. We have revised the description to reflect this fact.

Response to: Consider two options, capstone and thesis (and each one have more specific electives with less options) that will be useful for advancing their careers, for example, a student who wants to become a PhD would benefit from biomechanics as a requirement instead as an elective

- We feel that he two options are interchangeable in a student's career path. The options are intended to allow students a choice as to whether they want to carry out original research or rather immerse themselves in an exhaustive review and write up of current literature on a topic of interest. Thus, we do not feel a change is warranted in the curriculum based on option.

Response to: Any practical or internship requirements?

- Given the limited number of credits in a master's degree program, we feel the courses are best directed at the classroom and lab. Moreover, many if not most of the students in the program will be working, so they will be gaining practical experience while attending classes.

APPENDIX E

Curriculum Vitae of Faculty

Brad Schoenfeld

HIGHER EDUCATION:

A. DEGREES

Institution	Dates Attended	Degree and Major	Date Conferred
Rocky Mountain University	2011-2014	PhD in Health Promotion and Wellness	2014
University of Texas Permian Basin	2008-2010	M.S. in Exercise Science	2010
Pace University	1980-1985	B.A. in Management	1985

B. Additional higher education in progress

EXPERIENCE

A. TEACHING

Institution	Dates	Rank	Department
Lehman College	2014-present	Assistant Professor	Health Sciences
Rocky Mountain University	2014-present	Adjunct Professor	Health Science
Lehman College	2013-2014	Instructor	Health Sciences
Lehman College	2011-2013	Substitute Lecturer	Health Sciences
Lehman College	2010-2011	Adjunct Instructor	Health Sciences
Westchester Community College	2010-2013	Adjunct Instructor	Physical Education

EXPERIENCE

A. OTHER

Institution	Dates	Rank	Department
New Jersey Devils Hockey Organization	2017-present	Sports Nutrition Consultant	N/A
Personal Training Center for Women	1994-2011	Owner/Director	

ACADEMIC AND PROFESSIONAL HONORS

- 2016 United States Sports Academy: Dwight D. Eisenhower Fitness Award for outstanding achievement in fitness and contributions to the growth and development of sport fitness through outstanding leadership activity
- 2011 Personal Trainer of the Year (National Strength and Conditioning Association)
- 2001 IDEA Master Trainer
- New York State Merit of Scholastic Achievement
- Alpha Chi Honor Society

PUBLICATIONS (last 5 years only)

- **Schoenfeld, B.J**., Grgic, J. (2017). Evidence-based guidelines for resistance training volume to maximize muscle hypertrophy. *Strength and Conditioning Journal,* doi: 10.1519/SSC.0000000000000363 [Epub ahead of print]
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- **Schoenfeld, B.J**., Grgic. J. (2017). Eccentric overload training: A viable strategy to enhance muscle hypertrophy? *Strength and Conditioning Journal,* doi: 10.1519/SSC.0000000000000351 [Epub ahead of print]
- Ribeiro, A.S., Aguiar, A.F., **Schoenfeld, B.J.**, Nunes, J.P., Cavalcanti, E.F., Cadore, E.L., Cyrino, E.S. (2017). Effects of different resistance training systems on muscular strength and hypertrophy in resistance-trained older women. *Journal of Strength and Conditioning Research,* doi: 10.1519/JSC.0000000000002326 [Epub ahead of print]
- Ribeiro, A.S., Avelar, A., Nunes, J.P., **Schoenfeld, B.J**., Tomeleri, C.M., Garcêz, H., Júnior, P.S., Fernandez, R.R., Silva, A.M., Cyrino, E.S. (2017). Creatine supplementation elicits greater muscle hypertrophy in upper than lower limbs and trunk in resistance-trained men. *Nutrition and Health*. doi: 10.1177/0260106017737013
- Grgic, J., Lazinica, B., Mikulic, P., Orlic, I., **Schoenfeld, B.J**. (2017). Should resistance training programs aimed at muscular hypertrophy be periodized? A systematic review of periodized versus non-periodized approaches. *Science and Sports*. doi: 10.1016/j.scispo.2017.09.005 [Epub ahead of print]
- Ribeiro, A.S., **Schoenfeld, B.J.**, Nascimento, M.A., Silva, A.M., Fleck, S.J., Sardinha, L.B., Cyrino, E.S. (2017). Effects of single set resistance training with different frequencies on a cellular health indicator in older women. *Journal of Aging and Physical Activity,* doi: 10.1123/japa.2017-0258 [Epub ahead of print]
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- **Schoenfeld, B.J.** (2013). Potential Mechanisms for a Role of Metabolic Stress in Hypertrophic Adaptations to Resistance Training. *Sports Medicine,* 43(3), 179-194

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- Schoenfeld, B.J. (2016). The Science and Development of Muscle Hypertrophy. Champaign, IL: Human Kinetics
- Schoenfeld, B.J. (2016). Strong & Sculpted. Champaign, IL: Human Kinetics
- Schoenfeld, B.J. (2013). The MAX Muscle Plan. Champaign, IL: Human Kinetics

BOOK CHAPTERS

- Schoenfeld, B.J. (2017). In: Alvar, B. (Ed.). Essentials of Tactical Strength and Conditioning. Champaign, IL: Human Kinetics
- Schoenfeld, B.J., Aragon, A.A. (2016). Vitamin and Mineral Needs. In: Kersick, C. (Ed.), Sports Nutrition Needs for Child and Adolescent Athletes. Boca Raton, FL: CRC Press
- Schoenfeld, B.J. (2016). Exercise Program Design and Delivery. In: CanFitPro (Eds.). Foundations of Professional Personal Training, 2nd Edition. Champaign, IL: Human Kinetics
- Alvar, B., Peterson, M., Schoenfeld, B.J. (2014). Progressive Resistance Training. In: Schoenfelder, D.P. (Series Ed.), Series on Evidence-Based Practice Guidelines, Iowa City, IA: The University of Iowa College of Nursing John A. Hartford Foundation Center of Geriatric Nursing Excellence.
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- Dawes, J. and Schoenfeld, B.J. (2013). Core Training Exercises. In Williardson, J. (Ed.), NSCA's Sports Performance Series: Developing the Core. Champaign, IL: Human Kinetics

CONFERENCE PRESENTATIONS

- **Schoenfeld, B.** (2017). *Muscle Growth Across the Strength-Endurance Continuum: Is There an Optimal Hypertrophy Repetition Range?* 14th Annual International Society of Sports Nutrition Conference. Phoenix, AZ.
- **Schoenfeld, B.** (2017). *How to Design the Optimal Hypertrophy Program.* Sports Performance Summit. Amsterdam, Netherlands
- **Schoenfeld, B.** (2017). *Manipulating Resistance Training Variables to Maximize Hypertrophy.* Sports Performance Summit. Amsterdam, Netherlands
- **Schoenfeld, B.** (2017). *Loading Strategies to Maximize Muscular Adapations*. 8th International Scientific Conference on Kinesiology. Opatija, Croatia
- **Schoenfeld, B.** (2017). *Manipulating Resistance Training Variables to Maximize Hypertrophy*. 8th International Scientific Conference on Kinesiology. Opatija, Croatia
- **Schoenfeld, B.** (2017). *Loading Strategies to Maximize Muscular Adapations*. Professional Fitness Systems Convention. Nicosia, Cyprus
- **Schoenfeld, B.** (2017). *Nutrient Timing Revisited*. Professional Fitness Systems Convention. Nicosia, Cyprus
- **Schoenfeld, B.** (2017). *HIIT vs Steady State: Which Cardio is Best?* Professional Fitness Systems Convention. Nicosia, Cyprus
- **Schoenfeld, B.** (2017). *Facts and Fallacies of Fat Loss*. February Fitness Annual Conference. Leon, Spain.
- **Schoenfeld, B.** (2017). *Manipulating Resistance Training Variables for Maximal Muscle Growth*. February Fitness Annual Conference. Leon, Spain.
- **Schoenfeld, B.** (2017). *Strategies for Maximizing Muscle Development: Putting Science into Practice*. February Fitness Annual Conference. Leon, Spain.
- **Schoenfeld, B.** (2017). *The Back Squat – A Joint-by-Joint Assessment to Optimize Performance.* 5th Annual NSCA International Conference. Chiba, Japan
- **Schoenfeld, B.** (2017). *Combining Exercises for Maximal Growth.* 5th Annual NSCA International Conference. Chiba, Japan
- **Schoenfeld, B.** (2016). *Manipulating Resistance Training Variables for Maximal Muscle Growth*. 9th International Symposium on Strength Training. Madrid, Spain
- **Schoenfeld, B.** (2016). *Evidence-Based Hypertrophy Training.* 1st International Sport Nutrition Conference. Bologna, Italy
- **Schoenfeld, B.** (2016). *Strategies to Maximize Muscle Growth*. V International Congress Open Academy of Medicine. Venice, Italy (virtual lecture)
- **Schoenfeld, B.** (2016). *Strategies to Maximize Muscle Growth*. Fitness Institute Congress Annual Conference. Copenhagen, Denmark
- **Schoenfeld, B.** (2016). *Myths and Facts About Hypertrophy Loading Zones*. Sports Science and Fitness Congress. Cologne, Germany
- **Schoenfeld, B.** (2016). *Strategies to Maximize Muscle Growth*. Sports Science and Fitness Congress. Cologne, Germany
- **Schoenfeld, B.** (2016). *Facts and Fallacies of Fat Loss*. Akademiet for Personlig Trening, Oslo, Norway

- **Schoenfeld, B.** (2016). *Optimal Program Design for Muscular Development.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2016). *Facts and Fallacies of Fat Loss.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2016). *Periodization Strategies for Maximizing Muscular Adaptations.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.,** Aragon, A. (2016). *High vs. Low-Load Resistance Training Sets to Failure: Strength & Hypertrophy Outcomes.* National Strength and Conditioning Association National Conference. New Orleans, LA.
- **Schoenfeld, B.J**. (2016). *Resistance Training for Maximal Hypertrophy: The Science and Art of Muscle Optimizing Development*. Bropocalypse. Sydney, Australia
- **Schoenfeld, B.J**. (2016). *Facts and Fallacies of Fat Loss*. ISSN-Lehman College Sports Nutrition Workshop. Bronx, NY.
- **Schoenfeld, B.J**. (2015). *Nutrient Timing Revisited*. NSCA Mid-Atlantic Regional Conference. Philadelphia PA
- **Schoenfeld, B.,** Arent, S. (2015). *Nutrient Timing: The State of the Art (Panel Discussion).* American College of Sports Medicine's Annual New York Chapter Conference. New York, NY
- **Schoenfeld, B.,** Saldanha-Aoki, M. (2015). *The Science of Maximizing Muscle Hypertrophy through Resistance Training and Nutrition.* ENAF, Pocos de Calda, Brazil
- **Schoenfeld, B.** (2015). *Nutrient Timing Revisited: What to Eat and When For Maximal Muscle Growth*. Planeta Barcelona International Conference on Fitness and Wellness, Barcelona, Spain
- **Schoenfeld, B.** (2015). *Resistance Training for Maximal Hypertrophy: The Science and Art of Muscle Optimizing Development*. Planeta Barcelona International Conference on Fitness and Wellness, Barcelona, Spain
- **Schoenfeld, B.** (2015). *Manipulation of Resistance Training Program Variables: What Science Tells Us About Maximizing Muscle Growth*. Akademiet for Personlig Trening, Oslo, Norway
- **Schoenfeld, B.** (2015). *The Science of Squatting.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2015). *Hypertrophy Loading Zones: Optimizing Repetition Ranges for Maximal Muscle Growth.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2015). *Nutrition for Exercise: What Works, What Doesn't.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2015). *Hypertrophy Loading Zones: Optimizing Repetition Ranges for Maximal Muscle Growth*. United Kingdom Strength and Conditioning Association Annual Conference, Kenilworth, England
- **Schoenfeld, B.** (2015). *Manipulating Resistance Training Variables for Maximizing Muscle Growth.* National Strength and Conditioning Association National Conference. Orlando, FL.
- **Schoenfeld, B.** (2015). *Manipulating Resistance Training Variables for Maximizing Muscle Growth.* International Society of Sports Nutrition Annual Conference. Austin, TX.
- **Schoenfeld, B.** (2015). *Resistance Training: How Much Do You Need, How Best to Do It.* BodyPower Birmingham, England

- **Schoenfeld, B.** (2014). *Revisiting the Strength/Endurance Continuum: A New Paradigm for Hypertrophy Training* American College of Sports Medicine's Annual New York Chapter Conference. New York, NY
- **Schoenfeld, B.** (2014). *Light Weights for Bigger Muscles.* National Strength and Conditioning Association Personal Trainer Conference. Washington, D.C.
- **Schoenfeld, B.,** Aragon, A. (2014). *Nutrient Timing Revisited.* National Strength and Conditioning Association National Conference. Las Vegas, NV
- **Schoenfeld, B.** (2014). *Revisiting the Strength/Endurance Continuum: A New Paradigm for Hypertrophy Training.* NSCA IV International Conference on Human Performance Development through Strength and Conditioning. Keynote Address. Murcia, Spain
- **Schoenfeld, B.** (2014). *MAX Muscle: A Periodized Approach to Hypertrophy Training.* International Society of Sports Nutrition Annual Conference. Clearwater, Fl.
- **Schoenfeld, B.,** Aragon, A. (2014). *Nutrient Timing Revisited.* BodyPower Birmingham, England
- **Schoenfeld, B.** (2013). *Resistance Training for Fiber Type-Specific Adaptations.* American College of Sports Medicine's Annual New York Chapter Conference. New York, NY
- **Schoenfeld, B.** (2013). *Is Functional Training Really Functional.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2013). *The Science of Squatting.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2013). *MAX Muscle: A Periodized Approach to Hypertrophy Training.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2013). *Program Design for Muscle Hypertrophy: The Art and Science of Muscle Development.* CanFitPro International Fitness and Club Business Conference. Toronto, Canada
- **Schoenfeld, B.** (2013). *The Science of Squatting.* National Strength and Conditioning Association Personal Trainers Conference. Las Vegas, NV

PhD THESIS TITLE: Effects of different volume-equated resistance training loading strategies on muscular adaptations in well-trained men

PUBLICATIONS (prior to last 5 years)

- **Schoenfeld, B.J.** (2012). The use of anti-inflammatory drugs for exercise-induced muscle damage: Implications for skeletal muscle development. *Sports Medicine,* 42(12), 1017-1028
- Contreras, B., **Schoenfeld, B.,** Mike, J., Sonmez, G., Cronin, J. (2012). The biomechanics of the push-up: Implications for resistance training programs. *Strength and Conditioning Journal, 34*(5), 41-46
- **Schoenfeld, B**. (2012). Point/Counterpoint: Are deep squats a safe and viable exercise? *Strength and Conditioning Journal,* 34(2), 34–36
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- **Schoenfeld, B**., Contreras B. (2011). Strategies for optimal core training program design. *NSCA Performance Training Journal*, *10*(5), 20-24
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- **Schoenfeld, B**., Kolber M.J., Haimes, J.E. (2011). The upright row: Implications for preventing subacromial impingement. *Strength and Conditioning Journal, 33*(5), 25-28
- **Schoenfeld, B**. (2011). Resistance training during pregnancy: Safe and effective program design. *Strength and Conditioning Journal, 33*(5), 67-75
- **Schoenfeld, B**. (2011). The use of specialized training techniques to maximize muscle hypertrophy. *Strength and Conditioning Journal, 33*(4), 60-65.
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- **Schoenfeld, B**., Sonmez, G.T. (2011). Overcoming psychosocial barriers to maternal exercise: Intervention strategies to improve participation and adherence. *Biomedical Human Kinetics, 3*, 61 – 66
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- **Schoenfeld, B**. (2011). Does cardio after an overnight fast maximize fat loss? *Strength and Conditioning Journal, 33*(1), 23-25
- **Schoenfeld, B**. (2010). Is functional training really functional? *ACSM Certified News, 20*(3), 5-6
- **Schoenfeld, B.J**. (2010). The mechanisms of muscle hypertrophy and their application to resistance training. *Journal of Strength and Conditioning Research*. *24*(10), 2857–2872
- Sonmez, G.T., Colak, M., Sonmez, S., **Schoenfeld, B.** (2010). The effects of oral supplementation of mint extract on muscle pain and blood lactate levels. *Biomedical Human Kinetics, 2*, 66 – 69.
- **Schoenfeld, B**. (2010). Editorial: The state of personal training. *Strength and Conditioning Journal*, *32*(3):20
- **Schoenfeld, B.J**. (2010). Squatting kinematics and kinetics and their application to exercise performance. *Journal of Strength and Conditioning Research*, *24*(12), 3497-3506.
- ***Schoenfeld, B**., Dawes, J. (2009). High-intensity interval training: Applications for general fitness training. Strength and Conditioning Journal, 31*(6), 44-46
- ***Schoenfeld,* B**. (2004). *Omega-3 fatty acids: A novel fat burner*. *Strength and Conditioning Journal, 26*(3), 72–76
- **Schoenfeld, B**. (2002). Point/Counterpoint: Are multiple reps required for hypertrophy? *Strength and Conditioning Journal, 24*(4), 23–24
- **Schoenfeld, B**. (2002). *Accentuating muscular development through active insufficiency and passive tension. Strength and Conditioning Journal, 24*(4):20-22
- ***Schoenfeld,* B**. (2000). *Repetitions and muscle hypertrophy*. *Strength and Conditioning Journal, 22*(6) 67-68.

UNPUBLISHED WORK (supported by evidence)

a. Works accepted for publication

- **Schoenfeld, B.J**., Grgic. J. (In Press). Can drop sets enhance muscle growth? *Strength and Conditioning Journal*,

- Ribeiro, A.S., Silva, D.R.P., Pereira, L.C., Teixeira, D.C., **Schoenfeld, B.S**., Cyrino, E.S., Guedes, D.P. (In Press). Physical activity and sitting time are specifically associated with multiple chronic diseases and medicine intake in Brazilian older adults. *Journal of Aging and Physical Activity,*
- Lopes, R.C., Alex Harley Crisp, A.H., **Schoenfeld, B.J**., de Faria Ramos, M., Germano, M.D., Verlengia, R., da Mota, G.R., Marchetti, P.H., Aoki, M.S. (In Press). Effect of rest interval length between sets on total load lifted and blood lactate response during total-body resistance exercise session. *Asian Journal of Sports Medicine*.
- Ide, B.N., Moreira, A., **Schoenfeld, B.J**., Lodo, L. Mesquita, H., Gomes, R.V., Lopes, C.R., Aoki, M.S. (In Press). Acute effects of different warm-up interventions on neuromuscular performance of recreational soccer players. *Revista Brasileira de Ciência e Movimento*

b. Works submitted for publication

- Nunes, J.P., Ribeiro, A.S., Schoenfeld, B.J., Cyrino, E.S. (In Review). Are the additional strength gains observed in periodized vs. non-periodized resistance training due to the principle of variation or the specificity of training? *Sports Medicine,*
- Grgic, J., **Schoenfeld, B.J**. (In Review). A case for considering age and gender when prescribing rest intervals in resistance training. *Muscle and Nerve*.
- Ribeiro, A.S., **Schoenfeld, B.J.**, Nascimento, M.A., Silva, A.M., Fleck, S.J., Sardinha, L.B., Cyrino, E.S. (In Review). Effects of low-volume resistance training with different frequencies on cellular health indicator in older women. *Journal of the American Aging Association,*
- **Schoenfeld, B.J**., Grgoc. J. (In Review). Eccentric overload training: A viable strategy to enhance muscle hypertrophy? *Strength and Conditioning Journal,*
- Contreras, B., Vigotsky, A.D., **Schoenfeld, B.J.**, Beardsley, C., Cronin, J. (In Review). A review of gluteus maximus EMG activity during resisted hip extension exercise. *Strength and Conditioning Journal*
- Contreras, B, Vigotsky, AD, **Schoenfeld, BJ**, Beardsley, C, Cronin, J. (In Review). Reliability of the horizontal push test. *Sports Biomechanics,*
- Ribeiro, A.S., Tomerli, C.M., Souza, M.F., Pina, F.L.C., Nascimento, M.A., **Schoenfeld, B.J.**, Venturini, D., Barbosa, D.S., Cyrino, E.S. (In Review). Influence of trainability levels on inflammatory and metabolic profile responses induced by resistance training in elderly women. *Experimental Gerontology*
- Varvik, F.T., **Schoenfeld, B.J**. (In Review). Do type 1 muscle fibers have the same muscle growth potential as type 2 muscle fibers? *Muscle and Nerve*
- Tomeleri, C., Ribeiro, A., Cavaglieri, C., Deminice, R. **Schoenfeld, B.J.,** Santos, L., Souza, M., Antunes, M., Venturini, D., Barbosa, D., Sardinha, L., Cyrino, E. (In Review). Correlations between resistance training-induced changes on phase angle and changes on biochemical markers in older women: a randomized controlled trial. *Journal of Gerontology: Medical Sciences*
- Vigotsky, A.D., Bryanton, M.A., Nuckols, G., Beardsley, C., Contreras, B., Evans, J., **Schoenfeld, B.J.** (In Review). Biomechanical, anthropometric, and psychological determinants of squat strength. *Journal of Applied Biomechanics,*
- Ribeiro, A.S., Silva, D.R.P., Pereira, L.C., Teixeira, D.C., **Schoenfeld, B.S**., Cyrino, E.S., Guedes, D.P. (In Review). Physical activity and sitting time are specifically associated with chronic diseases and medicine intake in Brazilian older adults. *Journal of Physical Activity and Health,*

- Ribeiro, A.S., Avelar, A., Nunes, J.P., **Schoenfeld, B.J**., Tomeleri, C.M., Garcêz, H., Júnior, P.S., Fernandez, R.R., Silva, A.M., Cyrino, E.S. (In Review). Effect of creatine supplementation associated with resistance training on body composition segments in young adult resistance-trained men. *Nutrition and Health*.
- Fink, J., **Schoenfeld, B.J**. (In Review). Elucidation of the resistance training induced hormone theory myth. *International Journal of Sports Medicine.*
- Fink, J., **Schoenfeld, B.J**., Sakamaki, M., Nakazato, K. (In Review). Physiological responses to agonist-antagonist superset resistance training. *International Journal of Sports Medicine*
- Dos Santos, L., Ribeiro, A.S., **Schoenfeld, B.J**., Cyrino, E.S. (In Review). Effects of pyramid systems performed with wide or narrow repetition zone on muscular strength and hypertrophy in older women. *Journal of Strength and Conditioning Research,*
- Marcolin, G., Saoncella, M., Grigoletto, D., Pacelli, F.Q., Zamparo, P., **Schoenfeld, B.J.**, Paoli, A. (In Review). Mind-muscle connection: Effects of verbal instructions in EMG during the bench press in resistance trained males. *International Journal of Sports Medicine*.
- Tomeleri, C.M., Ribeiro, A.S., **Schoenfeld, B.J**., Souza, M.F., Schiavoni, D., Antunes, M., Cunha, P.M., Venturine, D., Barbosa, D.S., Cyrino, E.S. (In Review). Order of exercises on muscular strength, hypertrophy and anabolic hormones in older women. *Journal of Sports Medicine and Physical Fitness*
- **Schoenfeld, B.J**., Vigotsky, A., Contreras, B., Winkleman, N., Larson, R., Alto, A., Golden, S., Paoli, A. (In Review). Attentional focus strategies during resistance training elicit differential effects on muscular adaptations. *International Journal of Sports Medicine*
- Bocalini, D.S., **Schoenfeld, B.J.** (In Review). Multivariate analysis to evaluate the resistance to fatigue in active and inactive individuals. *Frontiers in Physiology,*
- Grgic, J., **Schoenfeld, B.J.** (In Review). Are hypertrophic adaptations to high and low load resistance training muscle fiber type specific? A systematic review. *Journal of Science and Medicine in Sport,*
- Teixeira, C.V., Pereira, E.F.M., Evangelista, A.L., Lopes, C.R., Guedes Júnior, D.P., **Schoenfeld, B.J.**, Bocalini, D.S. (In Review). Is the weekly sets volume training performed by trained subjects in accordance with training recommendations guidelines for muscle hypertrophy? *Journal of Strength and Conditioning Research,*
- Ribeiro, A.S., Aguiar, A.F., **Schoenfeld, B.J.**, Nunes, J.P., Cavalcanti, E.F., Cadore, E.L., Cyrino, E.S. (In Review). Effects of different resistance training systems on muscular strength and hypertrophy in resistance-trained older women. *Journal of Sports Science,*
- Junior, P.S., Ribeiro, A.S., Nabuco, H.C.G., Fernandes, R.R., Tomeleri, C.M., Venturini, D., Barbonsa, D.S., **Schoenfeld, B.J.**, Cyrino, E.S. (In Review). Effects of whey protein supplementation associated with resistance training on muscular strength, hypertrophy and muscle quality in pre-conditioned older women. *International Journal of Sports Nutrition and Exercise Metabolism*.
- Grgic, J., **Schoenfeld, B.J**., Davis, T., Lazinica, B., Krieger, J.W. (In Review). A systematic review and meta-analysis of the effect of resistance training frequency on gains in muscular strength. *Sports Medicine*.
- **Schoenfeld, B.J**., Grgic, J. (In Review). Evidence-based guidelines for resistance training volume to maximize muscle hypertrophy. *Strength and Conditioning Journal,*
- **Schoenfeld, B.J**., Aragon, A.A. (In Review). How much protein can the body use in a single meal for muscle-building? *Journal of the International Society of Sports Nutrition*.
- Vigotsky, A.D., **Schoenfeld, B.J.**, Than, C., Brown, J.M. (In Review). Methods Matter: The relationship between strength and hypertrophy depends on methods of measurement and analysis. *Journal of Sports Science.*

- **Schoenfeld, B.J**., Grgic. J. (In Review). Can drop sets enhance muscle growth? *Strength and Conditioning Journal,*
- Brigatto, Lopes, C. **Schoenfeld, B.J**. (In Progress). Effect of resistance training frequency on neuromuscular performance and muscle morphology after eight weeks in well-trained men. *Journal of Strength and Conditioning Research*
- Lasevicius, T., **Schoenfeld, B.J**., Grgic, J., (In Review). Resistance training performed 2 versus 3 days per week elicits similar increases in muscular strength and hypertrophy in resistance-trained men. *Journal of Strength and Conditioning Research*.

c. Works in progress

- Tinsley, G., **Schoenfeld, B.J**. (In Progress). Body composition changes in an elite figure competitor across multiple competitions: A case study.
- Escalante, G., **Schoenfeld, B.J**. (In Progress). Precompetition training practices and body composition changes in elite bodybuilders.
- Orlic, I., **Schoenfeld, B.J**. (In Progress). Effects of very high vs moderately high frequency resistance training on muscular adaptations.
- Feriche, B., **Schoenfeld, B.J**. (In Progress). Effects of acute hypoxia on muscular adaptations.
- Sumrall, S., **Schoenfeld, B.J**., Berger, C. (In Progress). Resistance training rest between sets: influence on respiratory exchange ratio
- Bocalini, D.S., Baker, J., **Schoenfeld, B.J.** (In Progress). Influence of weekly frequency in resistance exercise on muscle adaptations in healthy individuals.
- Ribeiro, A.S., Avelar, A., Nunes, J.P., **Schoenfeld, B.J**., Tomeleri, C.M., Garcêz, H., Júnior, P.S., Fernandez, R.R., Silva, A.M., Cyrino, E.S. (In Progress). Creatine supplementation does not change the ratio between intracellular water and skeletal muscle mass in resistance-trained men: a randomized, double-blinded, and placebo-controlled trial
- **Schoenfeld, B.J**., Arciero, P. (In Progress). Strength and body composition changes in a structured resistance training program consuming protein either pre- or post-workout.
- Feriche, B., **Schoenfeld, B.J**. (In Progress). Muscle power trainability in conditions of hypoxia.
- Ogborn, D., **Schoenfeld, B.J**. (In Progress). Evidence based personal Training: A narrative review
- Pereira, P.E., Azevedo, P., **Schoenfeld, B.J**. (In Progress). Effects of different eccentric action tempos on muscular adaptations
- Johnson, K., Vandusseldorp, T., **Schoenfeld, B.J**. (In Progress). Inclusion of no-load isometric contractions to traditional resistance training
- Maden-Wilkinson, T., Thompson, S., Hembrough, D., Balshaw, T., Franchi, M., **Schoenfeld, B.** (In Progress). The effects of loading intensity and training to failure on muscle architecture and functional adaptations.
- Maloney, S., **Schoenfeld, B.J**. (In Progress). Effects of adding loaded intraset stretch to traditional resistance training.
- **Schoenfeld, B.J**. (In Progress). Resistance training loading zones to maximize hypertrophy: A re-examination of the repetition continuum.
- **Schoenfeld, B.J**., Contreras, B., Alto, A., Belliard, R. (In Progress). Efficacy of a virtual reality training system on muscular adaptations and cardiorespiratory fitness.
- **Schoenfeld, B.J,** Miller, M.G. (In Progress). Comparison of post-exercise energy expenditure in a combined bout of resistance training and aerobic interval training versus each bout alone.

- **Schoenfeld, B.J,** Miller, M.G. (In Progress). Effects of circuit resistance training versus high-intensity interval training on muscular outcomes.
- **Schoenfeld, B.J,** Digman, M., O'Boyle, R., Miller, M.G. (In Progress). Functional outcomes in free weight versus machine exercise in resistance trained men.
- Contreras, B., Vigotsky, A.D., **Schoenfeld, B.J.**, Beardsley, C, Cronin, J. (In Progress). A comparison of power, impulse, and peak force in the back squat and barbell hip thrust exercises.
- **Schoenfeld, B.J**., Krieger, J., Wilborn, C., Urbina, S.L., Hayward, S.B., Fedewa, M.V., Esco, M. (In Progress). Comparison of multi-frequency bioelectrical impedance versus dual energy x-ray absorptiometry for assessing body composition changes following participation in a 10-week resistance training program. *Clinical Physiology and Functional Imagining,*
- Smolarek Ade, C., de Salles, B.F., de Souza Junior, T.P., **Schoenfeld, B.J**., (In Progress). Strength decline in sedentary males and females of different ages
- Negaresh, R., **Schoenfeld, B.J**., (In Progress). Is caffeine consumption beneficial to winning a wrestling tournament? A preliminary study

GRANTS RECEIVED

a. Multiple

- Maden-Wilkinson, T., Thompson, S., Hembrough, D., Balshaw, T., Franchi, M., **Schoenfeld, B.** (2017). United Kingdom Strength and Conditioning Association. *The effects of loading intensity and training to failure on muscle architecture and functional adaptations*. $2,600. Status: In Review
- Sonmez, G.T., **Schoenfeld, B.** (2016). State of New York, Graduate Research Technology Initiative Grant. $37,599. Status: Funded.
- Sonmez, G.T., **Schoenfeld, B.** (2016). Lehman College Student Tech Fee Fund Grant, $30,254. Status: Funded.
- Sonmez, G.T., **Schoenfeld, B.** (2015). Lehman College Student Tech Fee Fund Grant, $30,672. Status: Funded.
- **Schoenfeld, B.,** Sonmez, G.T. (2014). State of New York, Graduate Research Technology Initiative Grant. $45,900. Status: Funded.

b. Individual

- **Schoenfeld, B.** (2017). Renaissance Research Fund. *Effects of hypoxia on muscular adaptations.* $3000. Status: Funded
- **Schoenfeld, B.** (2017). Efficacy of a virtual reality training system on muscular adaptations and cardiorespiratory fitness. $36,815.10. Status: Funded
- **Schoenfeld, B.** (2017). PSC-CUNY Round 48. *Effects of graded increases in resistance training volume on muscular adaptations in trained men*. $10,495. Status: Funded
- **Schoenfeld, B.** (2016). Dymatize Sport Nutrition Excellence in Scholarship Grant. *Effects of attentional focus during resistance training on longitudinal muscular adaptations.* $6,000. Status: Funded
- **Schoenfeld, B.** (2015). PSC-CUNY Round 46. *The effects of heavy- vs. moderate-load resistance training on muscular adaptations in well-trained men*. $6,000. Status: Funded.
- **Schoenfeld, B.** (2015). Dymatize Sport Nutrition Excellence in Scholarship Grant. *Effects of mixed versus constant repetition ranges on muscle strength and hypertrophy*. $4,800. Status: Funded

- **Schoenfeld, B.** (2014). Dymatize Sport Nutrition Excellence in Scholarship Grant. *Muscular adaptations following low- versus high-load resistance training in well-trained men.* $7,000. Status: Funded
- **Schoenfeld, B.** (2014). PSC-CUNY Round 45. *Muscular adaptations in a volume-equated split versus total body resistance training routine in well-trained men*. $5,000. Status: Funded.
- **Schoenfeld, B.** (2013). Dymatize Sport Nutrition Excellence in Scholarship Grant. *The effect of nutrient timing on muscle strength and hypertrophy: A systematic review and meta-analysis.* $2,000. Status: Funded
- **Schoenfeld, B.** (2013). Dymatize Sport Nutrition Excellence in Scholarship Grant. *Does hypertrophy-type resistance training promote greater muscle growth than strength-type training?* $9,800. Status: Funded

c. Works in progress

- **Schoenfeld, B.** (2017). National Institute of Health-National Institute of Aging, R15. *Development of a Low-load Exercise to Target Sarcopenia Lifting (LETS-Lift) Program to Enhance Functional Capacity in Frail Elderly Women*. $300,000. Status: In Review

d. Not Funded

- **Schoenfeld, B.** (2015). PSC-CUNY Round 47. *Dose-response relationship between resistance training volume and muscular adaptations in trained men*. $10,495. Status: Not Funded
- **Schoenfeld, B.** (2015). CUNY Junior Faculty Research Awards in Science and Engineering. *Effects of low-load resistance training on functional and cognitive outcomes in elderly women.* $50,000. Status: Not Funded.
- **Schoenfeld, B.** (2013). National Strength and Conditioning Association Doctoral Grant. *Does hypertrophy-type resistance training promote greater muscle growth than strength-type training?* $10,000. Status: Not funded
- **Schoenfeld, B.** (2012). National Strength and Conditioning Association Doctoral Grant. *Does hypertrophy-type resistance training promote greater muscle growth than strength-type training?* $10,000. Status: Not funded

SERVICE TO THE DEPARTMENT

- Search Committee member for REC Assistant/Associate Professor Position, Lehman College (2018)
- Search Committee chair for Exercise Science Assistant Professor/Associate Professor/Lecturer Position, Lehman College (2016-2017)
- Search Committee chair for HSA Assistant/Associate Professor Position, Lehman College (2016)
- Search Committee member for REC Assistant/Associate Professor Position, Lehman College (2016)
- Department Representative for Accepted Student Reception (2016)
- Search Committee chair for HSA Assistant/Associate Professor Position, Lehman College (2015-2016)
- Search Committee member for DFN Assistant/Associate Professor Position, Lehman College (2015)
- Curriculum Committee chair, Lehman College (2017)
- Curriculum Committee member, Lehman College (2014 – 2016)

- Search Committee member for DFN Internship Coordinator Position, Lehman College (2014)
- Ad Hoc Committee member for Establishing a Physical Education Program, Lehman College (2014)
- Assessment Coordinator, Lehman College (2013 - Present)

SERVICE TO THE COLLEGE

- Developed the Graduate Program in Human Performance and Fitness for the Exercise Science Program (2017)
- Invited presentation/discussion at the Leonard Lief Library (December, 2017)
- Chair for Lehman Athletics Compliance Committee, Lehman College (2016-present)
- Project Senior Muscle: An Initiative by the Lehman College School of Health Sciences, Human Services, and Nursing for Health Promotion and Wellness in the Bronx, NY (2016)
- NCAA Faculty Athletic Representative (2016-present)
    - Responsible for ensuring that all Lehman athletic programs are in compliance with NCAA rules
    - Act as a liaison between student athletes and faculty to resolve any issues related to academic aspects of athletic participation
- Search Committee member for Associate Dean Position, Lehman College (2015)
- Featured in 'Lehman Today'
    - "Herald Tribune: Post-Workout Eating Myths" http://wp.lehman.edu/lehman-today/herald-tribune-post-workout-eating-myths/
    - "US News & World Reports: Six Workout Trends—And What They Mean to Your Wallet" http://wp.lehman.edu/lehman-today/us-news-world-reports-six-workout-trends-and-what-they-mean-to-your-wallet/
    - "The Benefits of Strength Training While You're Pregnant" http://wp.lehman.edu/lehman-today/the-benefits-of-strength-training-while-youre-pregnant/
    - "Huffington Post: Professor Brad Schoenfeld on the Three Building Blocks of Fitness" http://wp.lehman.edu/lehman-today/huffington-post-professor-brad-schoenfeld-on-the-three-building-blocks-of-fitness/

SERVICE TO THE UNIVERSITY

- Faculty Member, Institute for Health Equity, City University of New York (2017-present)
    - Serve on Research subcommittee to determine how to best integrate research into the mission of the Institute
    - Help to set policies and procedures for the Institute

COMMUNITY SERVICE

a. Professional Service

- National Strength and Conditioning Association: Member and Fellow (2000 - Present)
    - Ad Hoc Committee for NSCA Expansion into Brazil: Chair (2016)
    - Finance Committee: Chair (2013-2014)
    - Blue Ribbon Panel to Examine Offering Specialty Credentialing: Chair (2014)
    - Committee to review the Policies and Procedures Manual: Member (2014)
    - Secretary/Treasurer (2013 - 2014)

- Board of Directors: Member (2012 - Present)
- Conference Committee: Liaison (2012 - Present)
- Special Populations Exam Development Committee: Member (2010 - 2014)
- Ad Hoc Committee for Feasibility of a Personal Training Journal: Chair (2012)
- Blue Ribbon Panel to Examine Advancement of Personal Training Certification: Co-Chair (2012)
- Personal Trainer Special Interest Group: Member (2011 - 2012)
- Ad Hoc Committee for Feasibility of a Special Populations Journal: Member (2011 - 2012)
- Conference Committee: Member (2008 - 2012)

- Frontiers in Physiology: Review Editor (2017 - Present)
- Journal of Strength and Conditioning Research: Senior Associate Editor (2017 - Present)
- Strength and Conditioning Journal: Evidence-Based Training Column Editor (2015 - Present)
- Journal of the International Society of Sports Nutrition: Associate Editor (2015 - Present)
- Strength and Conditioning Journal: Associate Editor-in-Chief (2013 - Present)

b. Board Service

- Editorial Advisory Board Member: Frontiers in Physiology (2017 - Present)
- Scientific Advisory Board Member: Dymatize Europe (2016 - Present)
- Advisory Board Member/National Strength and Conditioning Association – Spain Affiliate (2015 - Present)
- Community Advisory Board Member, North Central Bronx/Jacobi Hospital (2015-2017)
- Editorial Advisory Board Member: Journal of Strength and Conditioning Research (2014 - Present)
- Scientific Advisory Board Member: Dymatize Nutrition Corporation (2013 - Present)
- Editorial Advisory Board Member: Journal of the International Society of Sports Nutrition (2013 - Present)
- Board of Directors Member/National Strength and Conditioning Association (2012 - Present)
- Board of Directors Member/American Academy of Personal Training (2009 - 2010)

MEDIA

a. Internet

- **Self.com (December 2017). "**Following a Specific Fitness Program Is the Key to Hitting Your Goals." https://www.self.com/story/following-a-specific-fitness-program-is-key-to-losing-weight
- Bodybuilding.com (December 2017). "7 Ways to Make Your Workouts More Hardcore." https://www.bodybuilding.com/content/7-ways-to-make-your-workouts-more-hardcore.html
- WeightWatchers.com (December 2017). "How Much Exercise Do You Really Need?" https://www.weightwatchers.com/us/article/how-much-exercise-do-you-really-need
- **Vitamin Shoppe (December 2017). "**Are You Neglecting These Two Glute Muscles?" https://whatsgood.vitaminshoppe.com/2017/12/06/overlooked-glute-muscles/
- **NBCnews.com. (December 2017).** "What Happens to Your Body When You Skip the Gym?" https://www.nbcnews.com/better/health/what-happens-your-body-when-you-skip-gym-ncna830886
- **AskMen.com (November 2017). "Get Bigger Biceps with a Body Weight Workout."** https://www.askmen.com/sports/bodybuilding/get-bigger-biceps-with-a-bodyweight-workout.html
- **LiveScience.com (November 2017). "Can You Turn Fat into Muscle?"** https://www.livescience.com/60904-can-you-turn-fat-into-muscle.html
- **AskMen.com (October 2017). "How to Gain Muscle for Skinny Guys."** https://www.askmen.com/top_10/fitness/how-to-gain-muscle-for-skinny-guys_2.html

- **The Conversation.com (September 2017). "BCAA Supplements are Just Hype – Here's a Better Way to Build Muscles."** https://theconversation.com/bcaa-supplements-are-just-hype-heres-a-better-way-to-build-muscles-84411
- Bodybuilding.com (August, 2017). "Metabolic Resistance Training" https://www.bodybuilding.com/fun/metabolic-resistance-training-build-muscle-torch-fat.html
- Huffington Post (July 2017). "Pre And Post Workout Nutrition: What Is It And Do You Need?" http://www.huffingtonpost.co.uk/entry/pre-and-post-workout-nutrition-what-is-it-and-do-you-need_uk_5a155cb9e4b0815d3ce65b66
- Daily Burn. (May 2017). "What Happens to Your Body When You Skip the Gym?" http://dailyburn.com/life/fitness/skip-the-gym-out-of-shape/
- Ask Men. (April 2017). Do You Need to Deload Your Weight Training? http://uk.askmen.com/sports/bodybuilding/do-you-need-to-deload-your-weight-training.html
- Bodybuilding.com. (March 2017). "Four Things You Never Learned About Muscle Growth" https://www.bodybuilding.com/content/4-things-you-never-learned-about-muscle-growth.html
- Vitamin Shoppe. (March 2017). Let's Set The Record Straight About Fasted Cardio https://whatsgood.vitaminshoppe.com/2017/03/15/fasted-cardio/
- T-Nation. (March 2017). Tip: Rest This Long Between Sets https://www.t-nation.com/training/tip-rest-this-long-between-sets
- MyFitnessPal.com Is HIIT the Only Workout You Need? http://blog.myfitnesspal.com/hiit-workout-need/
- Bodybuilding.com (January 2017). The Myth Of Cardio Before Breakfast Debunked! https://www.bodybuilding.com/content/the-myth-of-cardio-before-breakfast-debunked.html
- AskMen.com. (November 2016). http://www.askmen.com/sports/bodybuilding/should-you-lift-weights-to-failure.html
- Huffington Post. (March 2016). http://www.huffingtonpost.com/melissa-edmonds/is-it-important-to-consume-protein-right-after-working-out_b_9418912.html
- Health.com. (January 2016). http://www.health.com/health/gallery/0,,20975639_22,00.html
- Bodybuilding.com. (January 2016). "The Myth of Cardio Before Breakfast Debunked" https://www.bodybuilding.com/content/the-myth-of-cardio-before-breakfast-debunked.html
- Huffington Post. (June 3, 2015). "Do Workouts Need to Make You Sore to Work?" http://www.huffingtonpost.com/jill-s-brown/workout-sore_b_7439796.html
- Huffington Post. (March 10, 2014). "The 3 Building Blocks of Fitness" http://www.huffingtonpost.com/self/health-and-fitness_b_4921624.html

b. Magazine

- Men's Health (December 2017). "5 Workout Mistakes That Are Sabotaging Your Muscle Gains" https://www.menshealth.com/fitness/workout-mistakes-for-muscle-growth
- Men's Health (November 2017). "6 Reasons You're Gaining Back All the Weight You Lost." https://www.menshealth.com/weight-loss/how-to-maintain-weight-loss
- Men's Health. (October, 2017). "Everything You Need to Know About the IIFYM Eating Plan" https://www.menshealth.com/nutrition/how-to-count-macronutrients-iifym-eating-plan
- Fitness Rx for Women. (September 2017). Fasted Cardio and Changes in Body Composition: What the Research Says http://www.fitnessrxwomen.com/weight-loss/cardio/fasted-cardio-and-changes-in-body-composition/

- Muscular Development Magazine. (August 2017). The Best Rep Range for Muscle Growth http://musculardevelopment.com/training/15972-the-best-rep-range-for-muscle-growth.html#.WcGfGrKGOUl
- Experience Life. (July 2017). https://experiencelife.com/article/the-case-for-strength/
- Time Magazine (June 2016) Why Weight Training is Ridiculously Good for You http://time.com/4803697/bodybuilding-strength-training/
- Paste Magazine. (June 2017). Achieve More in the Gym by Varying the Rep Range https://www.pastemagazine.com/articles/2017/06/bodies-in-balance-varying-the-rep-range.html
- Nutrition Action. (May 2017). Running on Empty http://www.nutritionaction.com/daily/exercise-for-health/running-on-empty/
- Men's Health. (April 2017). The Brutally Honest Story Of What Happened After This Man's Transformation http://www.menshealth.com/fitness/maintaining-single-digit-body-fat
- Fitness Rx for Women. (April 2017). 10 Minute Glute Blasting Circuits http://www.fitnessrxwomen.com/weight-loss/circuit-training/10-minute-glute-blasting-circuits/
- Men's Health. (March 2017). The Best Weight Lifting Advice for Men Over 40. http://www.menshealth.co.uk/healthy/the-best-weight-lifting-advice-for-men-over-40
- Women's Health Magazine. (March 2017). What Happens To Your Weight Loss When You Do The Same Workout Every Day http://www.womenshealthmag.com/weight-loss/workouts-to-lose-weight
- Fitness Rx for Women. (March 2017). Can You Target the Lower Abs http://www.fitnessrxwomen.com/training/workout-tips-advice/six-pack-training/
- Men's Fitness. (January 2017). "45 Minute Transformation Workout" http://www.mensfitness.com/training/workout-routines/45-minute-transformation-workout-get-back-shape-fast
- Muscular Development Magazine. (January 2017). "Optimum Rep Speed for Maximum Gains" http://www.musculardevelopment.com/training/14747-optimum-rep-speed-for-maximum-gains.html#.Vjpz4iv6tdx
- Muscular Development Magazine. (December 2016). "Partial versus Full Range of Motion Reps" http://musculardevelopment.com/training/15566-partial-vs-full-range-of-motion-reps-which-is-best.html#.WAoefMmuk8A
- Fitness Rx. (December 2016). "Split versus Full Body Routines" http://www.fitnessrxwomen.com/training/workout-tips-advice/split-vs-full-body-routines/
- US News and World Report. (December 2016). "Can You Gain Muscle While Losing Weight?" http://health.usnews.com/wellness/fitness/articles/2016-12-02/can-you-gain-muscle-while-losing-weight
- Bottom Line. (December 2016). "A Better Way to Weight Train" http://bottomlineinc.com/better-way-weight-train-try-light-weights/
- Women's Health. (November 2016). "Working Out While Pregnant" http://www.womenshealthmag.com/fitness/working-out-while-pregnant
- Fitness Magazine. (October 2016). "Your Snoozefest Strength-Training Routine Is Boring Your Muscles Too" http://www.fitnessmagazine.com/workout/lose-weight/build-strength/strength-training-tips-stronger-muscles/
- US News and World Report. (October 2016). "The 10 Most Underrated Exercises" http://health.usnews.com/wellness/slideshows/the-10-most-underrated-exercises-according-to-top-trainers
- Shape. (October 2016). "Shoulder Pain" http://www.shape.com/blogs/working-it-out/shoulder-pain-sign-good-workout-or-actual-injury

- Men's Health. (October 2016). “Trade Secrets to Make This Week Your Biggest Ever” http://www.menshealth.co.uk/building-muscle/pt-trade-secrets-to-make-this-week-your-biggest-ever
- Men's Health. (October 2016). “The Simplest Way to Build More Muscle” http://www.menshealth.co.uk/building-muscle/get-big/the-simplest-way-to-build-more-muscle
- Oxygen. (October 2016). “Gain Without Pain” http://www.oxygenmag.com/article/gain-pain-12174
- Fitness Rx. (September 2016). “Fasted Cardio and Changes in Body Composition” http://www.fitnessrxwomen.com/fat-loss/cardio/fasted-cardio-and-changes-in-body-composition/
- Muscle and Fitness. (August 2016). “Reeve’s Deadlift” http://www.muscleandfitness.com/workouts/back-exercises/back-basics-reeves-deadlift
- Outside Magazine. (August 2016). “Fasting Could Make You Faster” http://www.outsideonline.com/2109091/fasting-could-make-you-faster
- Cosmopolitan. (June 2016). “Fat Burning Hack” http://www.cosmopolitan.com/health-fitness/a59450/fat-burning-hack/
- Men's Health. (May 2016). “How Often Should You Lift” http://www.menshealth.com/fitness/how-often-should-you-lift
- Muscle and Fitness. (May 2016). “Sculpt Stronger Leaner Legs” http://www.muscleandfitness.com/muscle-fitness-hers/hers-workouts/sculpt-stronger-leaner-legs-supersets
- Oxygen. (May 2016). “Fine Tune Your Workout” http://www.oxygenmag.com/article/finetune-workout-11991
- Men's Health. (April 2016). “Best Lower Abs Exercises” http://www.menshealth.com/fitness/best-lower-abs-exercise
- US News and World Report. (March 2016). “Should You Even Bother with Cardio?” http://health.usnews.com/wellness/articles/2016-03-25/should-you-even-bother-with-cardio
- Men's Health. (February 2016).”New Bodybuilding Rules” http://www.menshealth.com/fitness/new-bodybuilding-rules
- Self. (December 2015). “Ultra-Effective Butt Exercises” http://www.self.com/fitness/2015/12/ultra-effective-butt-exercises-arent-squats/
- Men's Health Magazine. (November 2015). “The Best Fat Shedding Meal Plan” http://www.menshealth.ph/nutrition-weight-loss/diet-strategies/the-best-fat-shedding-meal-plan
- Men's Fitness. (November 2015). “Get Swole” http://www.mensfitness.com/training/build-muscle/get-swole-whats-deal-pump
- Bride's Magazine. (November 2015). “Which Workout is Better for Weight Loss” http://www.brides.com/blogs/aisle-say/2015/11/which-is-better-for-weight-loss-cardio-strength-training.html
- Self Magazine. (September 2015). “Best Workout for Fat Loss” http://www.self.com/fitness/fitness-news/2015/09/best-workout-fat-loss/
- Muscle and Fitness Hers. (September 2015). “Hers Workout Ultimate Mix” http://www.muscleandfitness.com/muscle-fitness-hers/hers-workouts/ultimate-mix
- Men's Journal. (August 2015). “How to Box Jump Like JJ Watt” http://www.mensjournal.com/health-fitness/exercise/how-to-box-jump-like-j-j-watt-20150417
- Shape Magazine. (August 2015). “Plateau-Busting Strategies” http://www.shape.com/fitness/workouts/plateau-busting-strategies-start-seeing-results-gym

- Men's Health Magazine. (March 2015). "Time Tested Bodybuilding Techniques" http://www.menshealth.com/fitness/time-tested-bodybuilding-techniques?page=7
- Men's Health Magazine. (February 2015). "Why Heavy Weights Aren't the Only Way to Build Size and Strength" http://www.menshealth.com/fitness/why-heavy-weights-arent-only-way-build-size-and-strength
- Details Magazine. (January 2015): "Muscle versus Cardio" http://www.details.com/story/muscle-vs-cardio
- Men's Health Magazine. (January 2015). "Brand New Study Puts Dieting Confusion to Rest" http://www.menshealth.com/nutrition/brand-new-study-puts-dieting-confusion-rest
- Women's Health Magazine. (December 12, 2014): "Partial Squat Variation" http://www.womenshealthmag.com/fitness/partial-squat-variation
- Outside Magazine. (May 2014). "The New Rules of Protein" http://www.outsideonline.com/1923911/new-rules-protein

c. Newspaper

- The Independent (October 2017). "BCAA supplements are just hype." http://www.independent.co.uk/life-style/health-and-families/bcaa-supplements-are-just-hype-heres-a-better-way-to-build-muscles-a7969961.html
- Global News. (July 2017). "How to Lose Belly Fat." http://globalnews.ca/news/3612810/how-to-lose-belly-fat/
- Global News. (June 2017). "8 reasons why weight training is incredible for your health." http://globalnews.ca/news/3513498/8-reasons-why-weight-training-is-incredible-for-your-health/
- Washington Post. (May 9, 2014): "How to Refuel After a Workout" https://www.washingtonpost.com/national/health-science/how-to-refuel-after-a-workout-without-undermining-your-hard-work/2014/05/19/7c16871c-da0f-11e3-b745-87d39690c5c0_story.html
- Financial Post. (November, 2011). "**Little bending required for these ab exercises."** http://www.financialpost.com/m/little+bending+required+these+exercises/5719017/story.html
- New York Times. (September 29, 2011): "A Safer Shoulder Workout" http://well.blogs.nytimes.com/2011/09/29/a-safer-shoulder-workout/?
- New York Times. (August 17, 2011): "Are Crunches Worth the Effort?" http://well.blogs.nytimes.com/2011/08/17/are-crunches-worth-the-effort/

d. Television

- WSMV - Channel 4, Nashville, TN. (January 2017). "Workout Tips for the New Year" http://www.wsmv.com/clip/13011599/nsca-workout-tips-1617

MEMBERSHIP IN PROFESSIONAL SOCIETIES (last 5 years only)

- National Strength and Conditioning Association
- United Kingdom Strength and Conditioning Association

Gul Tiryaki-Sonmez

TITLE: PROFESSOR **DEPARTMENT**: HEALTH SCIENCES

EFFECTIVE DATE: September 2007 **SALARY RATE:**

HIGHER EDUCATION

A. DEGREES

Institution	Dates Attended	Degree & Major	Date Conferred
University of New Mexico	9/1986 – 5/1990	Ph.D. Exercise Sciences	05/1990
Oklahoma State University	1/1984 – 5/1986	M.S. Exercise Sciences	05/1986
Youth & Sport Academy, Ankara, Turkey	9/1977 – 5/1981	B.S. Training Science	05/1981

B. Additional Higher Education and/or Education in Progress

EXPERIENCE

A. Teaching

Institution	Dates	Rank	Department
Lehman College	9/2016– present	Professor	Health Sciences
Lehman College	9/2007 – 9/2016	Associate Professor	Health Sciences
Edward Waters College	9/2006 –5/2007	Professor	Physical Education and Sports
Abant Izzet Baysal University	2/1999 – 9/2006	Professor	Physical Education and Sports

Sakarya University	1/1997 – 2/1999	Associate Professor	Physical Education and Sports
Dicle University	4/1996 – 1/1997	Associate Professor	Physical Education and Sports
Middle East Technical University	9/1993 – 4/1996	Associate Professor	Physical Education and Sports
Middle East Technical University	9/1990 – 4/1993	Assistant Professor	Physical Education and Sports

B. <u>Other</u>

Institution	**Dates**	**Rank**	**Department**
Lehman College	9/2007-Present	Director of Exercise Science Program	Health Sciences
Lehman College	7/2014 – 7/2017	Chair	Health Sciences
Lehman College	9/2007-2009	Founder of Exercise Science Program	Health Sciences
Edward Waters College	9/2006 –5/2007	Director of Program of Physical Education and Sports	Physical Education and Sports
Abant Izzet Baysal University	2/2004 – 9/2006	Vice President	Academic Affairs
Abant Izzet Baysal University	02/1999-9/2006	Chair & Graduate Studies Coordinator of Department of Exercise Science	Physical Education and Sports
Sakarya University	1/1997 – 2/1999	Director & Graduate Studies Coordinator of the School of Sports and Physical Education	Physical Education and Sports
Fenerbahce Sports Club, Istanbul, Turkey	1/1997 – 2/1999	Coordinator of Computerized Match Analyses & Assistant Director of Foreign Relations	Performance analysis

Dicle University	4/1996 – 1/1997	Director & Graduate Studies Coordinator of the School of Sports and Physical Education	Physical Education and Sports

ACADEMIC AND PROFESSIONAL HONORS

Candidate for "Science Woman of Year", nominated by the "Women's Journal ", Turkey, 1996

Scholarship to pursue doctorate in Exercise Physiology in USA, Turkish Ministry of National Education, 1982

Having graduated as the premier student from the Youth and Sports Academy, Ankara, Turkey, 1981

National Folk dancer, National Folk Dance Team, Turkey, 1974-1981

National Athlete, National Track & Field Team, Turkey, 1979-1981

PUBLICATIONS (last five years only)

Peer-reviewed articles:

Demirel, N., Tiryaki-Sonmez, G.**,** Eroglu, H.,Vatansever, S. The Effects of Gymnastics and Whole Body Vibration Exercises on Body Composition. Journal of Physical Education and Sports Management Vol. 4, No. 1, pp. 25-33, June 2017, ISSN 2373-2156 (Print) 2373-2164 (Online) DOI: 10.15640/jpesm.v4n1a2, URL: https://doi.org/10.15640/jpesm.v4n1a2

Tomaszewski, P., Milde, K., Majcher, A., Pyrz˙ak, B., Tiryaki-Sonmez, G., Schoenfeld, B. Advs Exp. Medicine, Biology - Neuroscience and Respiration. 2017 DOI 10.1007/5584_2017_65

Ucan,Y., Tiryaki-Sonmez, G. Effect of 2 Weeks Vitamin E Supplementation to the Point of Anaerobic Threshold. Ethno Med, 11(1): 13-20, 2017.

Tiryaki-Sonmez, G. Active Learning in the Sciences: WAC and a Food Nutrition Course. In Wolfe, M. & Yood. J. (Eds.) Public voices: Writing across Lehman College 2003-2012 (pp. 15-19). Bronx, NY: Lehman College of City University of New York. 2016. http://www.lehman.edu/academics/wac/index.php

Schoenfeld BJ, Aragon AA, Moon J, Krieger JW, Tiryaki-Sonmez G. Comparison of amplitude-mode ultrasound versus air displacement plethysmography for assessing body composition changes following participation in a structured weight-loss programme in women. Clin Physiol Funct Imaging. Online, 2016. DOI: 10.1111/cpf.12355.

Sozbir, K., G., Willems, M.E, **Tiryaki-Sonmez,** Ragauskas, Paulius. Acute Effects OF Contract-Relax PNF and Static Stretching on Flexibility, Jump Performance, and EMG Activities: A Case Study. Biology of Exercise, 12:1, 2016 DOI: http: doi.org/10.4127/jbe.2016.0099

Schoenfeld, B.J., Contreras, B. , Ogborn, D., Galpin, A., Krieger, J., **Sonmez, G. T.** Effects of Varied Versus Constant Loading Zones on Muscular Adaptations in Trained Men Int J Sports Med. 36:1–6, 2015. DOI http://dx.doi.org/.doi.org/10.1055/s/0035-1569369.

Tiryaki- Sonmez, G., Vatansever, S., Olcucu, B., Cinar, V. Impact of Music on Exercise Performance. Int. J. Rev. Life. Sci., 5(3), 1307-1312, 2015.

Olcucu, B., Vatansever, S., **Tiryaki- Sonmez, G.,** Burkan, S. Effect of Acute Exercise on Hunger in Healthy Woman. International Journal of Science Culture and Sport (IntJSCS), 3(3):6-17, 2015. DOI: 10.14486/IntJSCS383

Vatansever, S., Olcucu, B., **Tiryaki- Sonmez, G.** Impact of Exercise Modes on Appetite Markers. The Anthropologist, 21(1,2): 129-136, 2015.

Tiryaki- Sonmez, G., Vatansever, S., Olcucu, B. Schoenfeld, B. Obesity, Food Intake and Exercise: Relationship with Ghrelin. Biomedical Human Kinetics, 7, 119–127, 2015. DOI: 10.1515/bhk-2015-0019.

Olcucu, B., Vatansever, S., **Tiryaki- Sonmez, G.,** Schoenfeld, B. Exercise And Hormones Related To Appetite Regulation. Adv. Environ. Biol., 9(2), 1250-1263, 2015.

Sozbir, K., **Tiryaki-Sonmez, G.,** Yuktasir, B.,Yalcin, H.B., Aydin, K., Yildiz. N. The Effects Of Two Different Stretching Exercises Together With Plyometric Training On Flexibility, Vertical Jump Performance And Electromyographic Activities Of Muscles Of Lower Extremity. International Refereed Journal of Orthopaedıcs Traumatology And Sports Medicine. 2 (3) : 32-53, 2015. ID:19 K:16, ISSN Print: 2148-4805 Online 2148-5550, (In Turkish).

Schoenfeld, B. J., Ratamess, N., Peterson, M.D., Contreras, B., **Tiryaki-Sonmez, G.** Influence of Resistance Training Frequency on Muscular Adaptations in Well-Trained Men. J Strength Cond Res. Jul;29 (7):1821-9, 2015. doi: 10.1519/JSC.0000000000000970.

Schoenfeld B. J., Peterson MD, Ogborn D, Contreras B, **Tiryaki-Sonmez G.** Effects of Low- Versus High-Load Resistance Training on Muscle Strength and Hypertrophy in Well-Trained Men. J Strength Cond Res. Oct. 29 (10):2954-63, 2015. doi: 10.1519/JSC.0000000000000958.

Schoenfeld, B. J., Contreras, B., **Tiryaki-Sonmez, G.,** Wilson, J. M., Kolber, M. J., Peterson, M. D. Regional Differences in Muscle Activation During Hamstrings Exercise. Journal of Strength & Conditioning Research: Volume 29 - Issue 1 - p 159–164. December 2014. doi: 10.1519/JSC.0000000000000598

Schoenfeld, B. J., Contreras, B., Willardson, J.M., Fontana, F., **Tiryaki-Sonmez, G**. Muscle Activation During low‐ Versus high Load Resistance Training in Well Trained Men. European Journal of Applied Physiology, December 2014, Volume 114, Issue 12, pp 2491-2497, December 2014. DOI 10.1007/s00421-014-2976-9.

Schoenfeld, B.J., Aragon, A.A., Wilborn, C. D., Krieger,J.W., **Tiryaki-Sonmez, G.** Body Composition Changes Associated with Fasted Versus Non-Fasted Aerobic Exercise. J Int Soc Sports Nutr., 11(1):54, Nov 18, 2014. doi: 10.1186/s12970-014-0054-7.

Ozen, S., Olcucu, B., Burkan, S., **Tiryaki- Sonmez, G**. Effect of Acute Resistance Exercise on Appetite in Healthy Men. Life Sci J., 11 (10):1220-1224, 2014 . (ISSN:1097-8135). http://www.lifesciencesite.com. 182

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Schoenfeld, B.J., Ratamess, N., Peterson, M.D., Contrears, B., **Tiryaki-Sonmez, G.,** Alvar, B.A. Effects of different volume-equated resistance training loading strategies on muscular adaptations in well-trained men. Journal of Strength & Conditioning Research. 2014 Oct; 28 (10): 2909-18. doi: 10.1519/JSC.0000000000000480.

Ozen, S., Olcucu, B., Ozen, G., Dalli, M., **Tiryaki- Sonmez, G.** The Relationship Between Physical Fitness and Obesity in Turkish School Children. Journal of Health Sport and Tourism, 5(2), 2014. http://www.ijar.lit.az/medicine.php?go=currentmed

Tiryaki-Sonmez, G., Ozen, S., Olcucu, B. Respiratory Muscle Strength and Lung Volumes in Male Turkish Adolescents. International Journal of Academic Research Part A; 6 (5), 2014. DOI: 10.7813/2075-4124.2014/6-5/A.15

Schoenfeld, B.J., Contreras, B., **Tiryaki-Sonmez, G.,** Willardson, J.M., Fontana, F., Harris, R. An Electromyographic Comparison of a Modified Version of the Plank with a Long-lever and Posterior Tilt Versus the Traditional Plank Exercise: Implications for Functional Performance. Sports Biomech. 13(3): 296-306, Sept . 2014. doi: 10.1080/14763141.2014.942355. Epub 2014 Aug 5.

Tiryaki-Sonmez G., Ozen S., Bugdayci G., Karli U, Ozen G., Cogalgil S., Schoenfeld B., Sozbir K., Aydin K. Effect Of Exercise On Appetite-Regulating Hormones In Overweight Woman. Biol. Sport, 30:75-80, 2013. DOI: 10.5604/20831862.1044220

Contreras, B., Cronin, J., Schoenfeld, B., Nates, R.,**Tiryaki- Sonmez, G**. Are All Hip Extension Exercises Created Equal? Strength and Conditioning Journal, 35(2):17-22, 2013, doi:10.1519/SSC.0b013e318289fffd

Bugdayci,G., Yuktasir, B., Ozen, S., Yalcin, H.B., **Tiryaki- Sonmez, G.,** Cakici, H. The Effect of Exercise on Salivary Alpha-Amylase (sAA) Activity in Athletes. Journal of Turkish Clinical Biochemistry (Türk Klinik Biyokimya Dergisi), 11(1): 1-5, 2013. (In Turkish).

Schoenfeld, B.J., **Tiryaki-Sonmez, G.,** Kolber, M.J, Contreras, B., Harris, R., Ozen, S. Effect of Hand Position on EMG Activity of the Posterior Shoulder Musculature During a Horizontal Abduction Exercise. J Strength Cond Res. 2013, Oct;27 (10): 2644-9. doi: 10.1519/JSC.0b013e318281e1e9. [Epub January 8th 2013].

Contreras, B., Schoenfeld, B., Mike, J., **Tiryaki-Sonmez, G.,** John Cronin, J., Vaino, E. The Biomechanics of the
Push-up: Implications for Resistance Training Programs. Strength and Conditioning Journal, Volume 34 - Issue 5 - p 41–46, 2012, doi: 10.1519/SSC.0b013e31826d877b.

INVITED SPEAKER

"Inactivity and Obesity Rates in Different Countries"
Invited speaker, The 4th International *Balkan* Conference in Sport Sciences in Bursa, Turkey Bursa, May *21 – 23, 2017.*

" Physical Activity and Appetite Hormones"
Invited Speaker to give lectures for Doctoral students at Faculty of Sports, Uludag University, Turkey, 15 April, 2016.

"Inactivity and Obesity"
Invited speaker and give lectures at Josef Pilsudski University of Physical Education in Warsaw, Poland, September 23-27, 2015.

INTERNATIONAL PRESENTATIONS:

Demirel, N., **Tiryaki- Sonmez, G.,** Vatansever, S., Olcucu, B. The Effects of Gymnastics and Whole Body Vibration Exercises on Some Physical Fitness Parameters. 6th International Conference on Sport and Society "Sport in the Americas", University of Toronto, Toronto, Canada, 30-31 July 2015. (http://sportandsociety.com/the-conference).

Vatansever, S., **Tiryaki- Sonmez, G.,** Olcucu, B., Demirel, N. The Effects of Different Intensity Exercises on Appetites in Healthy Woman. 6th International Conference on Sport and Society "Sport in the Americas", University of Toronto, Toronto, Canada, 30-31 July 2015. (http://sportandsociety.com/the-conference.

Olcucu B, Vatansever S, **Tiryaki- Sonmez G.,** Oner S. Effect of Acute Exercise on Hunger in Healthy Woman. 4th International Conference on Science Culture and Sports. 22-26 May 2015, Ohrid, Makedonia.

Vatansever S, Olcucu B, **Tiryaki- Sonmez G.,** Oner S. Obestatin Response To Resistance Exercise in Male. 4th International Conference on Science Culture and Sports. 22-26 May 2015, Ohrid, Makedonia.

Oner S, Ozen S, Olcucu B, **Tiryaki Sonmez G.** Effect of Acute Resistance Exercise on Appetite in Healthy Men. 13th International Sports Sciences Congress, 7-9 November, 2014, Konya, Turkey.

Certel, Z., Bahadir, Z., **Tiryaki Sönmez, G.** Evaluation Of The Relation Between Self Esteem And Decision Making Styles In Team Sports In Terms Of Empathy And Decision Making. 12th International Sport Sciences Congress Denizli, Turkey, http://www.sporbilimlerikongresi2012.org/PROGRAM_SBK2012.pdf. page 40, P229, December 12-14, 2012.

Ozen, S., Ozen, G., **Tiryaki- Sonmez, G.** Physical Activity Levels of Turkish University Students. 22nd TAFISA World Congress, Sport for All: Building Bridges, November 10-14, Antalya, Turkey. Abstract book, p. 111-112, 2011.

LOCAL PRESENTATIONS

Alto, A., Gonzalez, O., Nazzerzadeh, S. and **Tiryaki-Sonmez, G.,** and Schoenfeld, B. Functional and preventative aspect of strengthening hip flexor muscles in relation to hip fractures in elderly population. Lehman College 7th Annual Research and Scholarship Day, April 24th, 2015.

PH.D. THESIS TITLE:

The Effects of Sodium Bicarbonate and Sodium Citrate Administration on 600m Running Performances, May 1990

PUBLICATIONS (Prior to "last five years")

Books:

Tiryaki-Sonmez, G.Exercise and Sports Physiology. Bolu, Turkey: Ata Press, 2002.

Tiryaki, G. Sources of Energy, Training Methods and Nutrition. Ankara, Turkey: General Management of Youth and Sports Press. 1993.

Book Chapters:

Tiryaki, G., F. Tuncel, F. Yamaner, S.A. Agaoglu, H. Gumusdag, M.F. Acar. Comparison of the Physiological Characteristics of the First, Second and Third League Turkish Soccer Players. Science and Football III. Eds. T. Reilly, J. Bangsbo and M. Hughes.E & F Spon, London: p.32-36, 1997.

Işlegen, C., M.F. Acar, A. Cecen, T. Erding, R. Varol, **G. Tiryaki**, O. Karamızrak. Effects of Different Pre-Season Preparations on Lactate Kinetics in Professional Soccer Players. Science and Football III. Eds. T. Reilly, J. Bangsbo and M. Hughes.E & F Spon, London: p.103-105, 1997.

Tamer, K., M. Gunay, **G. Tiryaki,** I. Cicioglu, E. Erol. Physiological Characteristics of Turkısh Female Soccer Players. Science and Football III. Eds. T. Reilly, J. Bangsbo and M. Hughes.E & F Spon, London:p.37-39, 1997.

Tiryaki, G., S. Cicek, A.T. Erdogan, F. Kalay, A.T. Atalay. The Analysis of the Offensive Pattern of the Switzerland Soccer Team in the 1994 World Cup. Notational Analysis of Sport I & II (Ed. M. Hughes) E & F Spon, London: p. 91-98, 1995.

Peer-reviewed articles:

Aydin, K., Sozbir, K., Yuktasir, B., Yalcin, H. B., Yildiz, N., **Tiryaki–Sonmez, G.** The Comparison of EMG Activities of Knee Extensor Muscles Between Soccer Players and Sprinters During Countermovement Jump

Performance. Nigde University Journal of Physical Education and Sport Sciences, (Nigde Universitesi Beden Egitimi ve Spor Bilimleri Dergisi) 5:(3), 242-249, 2011. (In Turkish).

Schoenfeld, B., **Tiryaki-Sonmez, G**. Overcoming Psychosocial Barriers to Maternal Exercise: Intervention Strategies to Improve Participation and Adherence. Biomedical Human Kinetics, 3, 61 – 66, DOI: 10.2478/v10101-011-0014-5, 2011.

Ozen, S., **Tiryaki-Sonmez, G.,** Bugdayci, G., Ozen, G. The Effects Of Exercise On Food Intake And Hunger: Relationship With Acylated Ghrelin And Leptin. Journal of Sports Sciences and Medicine,10, 283-291, 2011.

Tiryaki-Sonmez, G., Schoenfeld, B., Vatansever-Ozen, S. Omega 3 Fatty Acids And Exercise: A Review Of Their
Combined Effects On Body Composition And Physical Performance. Biomedical Human Kinetics, 3, 23 – 29, DOI: 10.2478/v10101-011-0007-4, 2011.

Ozen, S., **Tiryaki-Sonmez, G.,** Ozen, G. Anthropometric, Strength And Pulmonary Characteristics
Of Elite And Non Elite Sport Climbers. E-Journal of New WorldSciencesAcademy, ISSN:1306-3111, 6:2, Article number 2B0071, 2011. (In Turkish).

Tiryaki-Sonmez, G., Çolak, M., Sönmez, S., Brad Schoenfeld. Effects of Oral Supplementation of Mint Extract on
Muscle Pain and Blood Lactate. Biomedical Human Kinetics, DOI: 10.2478/v10101-0016-8, 2: 25-29, 2010.

Yaman, H., **Tiryaki-Sonmez, G.,** Gurel, K. The Effects Of Oral L-Arginine Supplementation On Vasodilation And Max VO2 Level of Male Soccer Players. Biomedical Human Kinetics, DOI:10.2478/v10101-010-0006- x, 2: 66-69, 2010.

Ozen, S., **Tiryaki-Sonmez, G.,** Yuktasir, B., Yalcin, B., Bugdayci, G., Willems, M. Effects Of Exercise On Leptin
And Acylated Ghrelin Hormones In Trained Males. Journal of Exercise Physiologyonline, 12 (2): 20-30, 2010.

Rising, R., **Tiryaki-Sonmez, G.** Energy Expenditure and Physical Activity In Recovering Malnourished Infants.
Journal of Nutrition and Metabolism, Article ID 171490, 7 pages, doi:10.1155/2010/171490, 2010.

Tiryaki- Sonmez, G., Ozen, S., Yuktasir, B., Yalcin, B., Ozen, G., Sonmez, S., Demirel, N.. The Effects Of High Altitude Climbing On Respiratory Parameters. Medicine Sportiva, 13 (1): 49-53, 2009.

Bugdayci, G., Koc, O., Yuktasir, B., Ozen, S., Yalcin, HB., **Tiryaki-Sonmez, G.** Salivary Antioxidant Capacity During Exercise In Athletes. Third International Congress Of Molecular Medicine, May 5–8, 2009, Istanbul, Turkey. Congress Proceedings, IUBMB Life, 61, 368-369, 2009.

Ozen, S and **Tiryaki-Sonmez, G.** Ghrelin Hormon And Exercise. Gazi University Journal of Physical Education & Sport Sciences, (Gazi Universitesi Beden Egitimi ve Spor Bilimleri dergisi), XIII, 3: 11 – 24, 2008.

Ozen, S.,Demirel, N., Yalcin, H.B. , **Tiryaki-Sonmez, G.,** The Overweight and Obesity Prevalence in 7-14 years Old Elementary School Children Living in Bolu, TURKEY. International Sport Sciences Congress, October 23- 25, Bolu, Turkey, p.964-967, 2008.

Sozbir, K., **Tiryaki-Sonmez, G.,** Yuktasir, B., Yalcin, H. B., Aydin, K., Yildiz, N. The Effects of Two Different
Streching Exercises Together With Plyometric Training On EMG Values And Some Physiological Parameters. 12th Annual Congress of the European Conference of Sport Sciences (ECSS), p. 21, 2007.

Guler, M., **Tiryaki-Sonmez, G.,** Yalcın, B., Stelzer, J., Ozer, S., Aydın, K. The Personality Characteristics Of Competitive Gymnasts. 7. World Congress of Performance Analysis of Sport, Szombathely, Hungary. Congress Proceedings. p. 98, 2006.

Gulseven, O., **Tiryaki-Sonmez, G.,** Yuktasır, B., Yalcın, B., Stelzer, J., Ucan, Y. The Effects Of Sodium Bicarbonate Loading On Anaerobic Performance. 7. World Congress of Performance Analysis of Sport, Szombathely, Hungary. Congress Proceedings. p. 87, 2006.

Sozbir, K., Yuktasır, B., Yalcın, B., Aydın, K., Ozen, S., Stelzer, J., **Tiryaki-Sonmez, G**. Investigation The Relationships Between Velocity, Agility And Vertical Jump To Performance Of Static Long Jump. 7. World Congress of Performance Analysis of Sport, Szombathely, Hungary. Congress Proceedings. p. 70, 2006.

Guzel, G., Gokmen,, H., **Tiryaki-Sonmez, G.,** Yuktaşır, B., Konukman., F. The Effects of Arousal Level on Reaction Time of 8-Year Old Children in Karate. Journal of Physical Education and Sport Sciences (http://e- dergi.atauni.edu.tr/index.php/besyo/article/view/921), 7 (2): 45-54, 2005.

Biçer, B., **Tiryaki-Sonmez, G.,** Yuktaşır, B.,Yalçın, H.B., Kaya, F. The Effect on Leg Strength of Different Overloads with Therabands. 10th ICHPER-SD Europe Congress and 8th TSSA International Sports Science Congress, Antalya, Turkey, Congress Proceedings. p.117, 2004.

Colak, R., **Tiryaki-Sonmez, G.** Performans Analysis and Periodization of Training in Long Distance Runners-I. www.atletik.org/ABTD-makaleler/makale-abtd0332-sayi43-sayfa23, 2001.

Colak, R., **Tiryaki-Sonmez, G.** Performans Analysis and Periodization of Training in Long Distance Runners-II. www.atletik.org/ABTD-makaleler/makale-abtd0333-sayi44-sayfa5, 2001.

Inal Ince, D., **Tiryaki- Sonmez, G.,** Ince, M.L. Effects of Garlic on Aerobic Performance. Turkish Journal of Medical Sciences. 30(6):557-561, 2000.

Sonmez, S., **Tiryaki-Sonmez, G.,** Yuktaşır, B., Şemşek, O.,Çolak, R. Effects of Using Nasal Stripe on Aerobic Performance in Women. Journal of Physical Education & Sport Sciences, (Gazi BESBD), V, 4: 3 – 10, 2000.

Sonmez, S., **Tiryaki-Sonmez, G.,** Yuktaşır, B., Şemşek, O.,Çolak, R. Effects of Nose Strap Usage on Aerobic Capacity in Men. Performance. 4(3-4):69-74, 1998.

Ince, M.L., **Tiryaki-Sonmez, G,** Koşar, N., Inal, D.. Blood Lactate, Ammonium, Phosphate Levels and Depletion Times in Distance Runners. A comparison between interval and endurance training. V. International Sports Science Congress, Ankara, Turkey, Congress Proceedings. p. 240-241, 1998.

Aşçı, F.H., Gokmen, H., **Tiryaki, G.** Self Concept and Body Image of Turkish High School Male Athletes and Non-Athletes. Adolescence. 32(128):960-968, 1997.

Tiryaki, G. and S. Muniroglu. Introducing the Use of Computer Analyses in Soccer. Journal of Soccer Science and Technology. p.18-19, 1996.

Tiryaki, G. A.T. Atalay, A. Kin. Performance Analysis of the Turkish National Soccer Team during the European Cup Elimination and Final Matches. III. World Congress of Notational Analysis of Sports, Antalya, Turkey, Congress Proceedings. pp.30, 1996.

Tiryaki, G., Talent Identification in Sports. Education and Health Center for Athletes (SESAM), Academic Activity Book, p.22-26, 1996.

Tiryaki, G., and H. Atterbom. The Effects of Sodium Bicarbonate and Sodium Citrate Administration on 600m Running Performances. The Journal of Sports and Medicine and Physical Fitness (Turin, Italy). 35:194-198, 1995.

Tiryaki, G. and F. Konukman. (Translation.) Thirty-Minute 12-Station Skill Improvement Training for Soccer. Journal of Soccer Science and Technology, p. 27-28, 1995.

Tiryaki, G. Sexual Activity and Athletic Performance. Journal of Science and Technic. 335:101-102, 1995.
Tuncel, F., Tiryaki, G., Tamer, K. Assessment of Cardiovascular Disease Risk Factors and Max VO2 of Adults. International Rehabilitation Medicine Congress, Istanbul, Turkey, p 86, 1995.

Tiryaki, G., F. Tuncel, K. Tamer. A Study on Lung Capacity and Body Composition of University Faculty Members. International Rehabilitation Medicine Congress, Istanbul, Turkey, p. 86, 1995.

Tuncel, F., L. Ince, A. Kin, D. Inal, T. Atalay, **G. Tiryaki.** A Comparison of Physical and Physiological Parameters in Swimmers, Cyclists, Runners and Triathletes. FISU/CESU Conference. Tokyo, Japan, CongressProceedings. p.420-421, 1995.

Tiryaki, G., D. Inal, L. Ince. (Translation.) Theory and Practice of Endurance Training. Journal of Athletics Science and Technology. 16:9-13, 1994.

Tiryaki, G. Olympic Preparations: Identification of Talent and Scientific Training Methods. Symposium: "Turkey in the Olympics " İTU Physical Education and Sports Department, Istanbul, Turkey, Proceedings, p. 163-169, 1994.

Tiryaki, G. Exercise and Activation of Insulin Hormone. Second Congress on Altitude and Sports. University of Erciyes Press, Kayseri, Turkey: Congress Proceedings. p.47-57, 1993.

Tiryaki, G. and M. Unal. The Relationship of Blood Phosphokinase and Lactate Dehydrogenase Enzyme Levels with Muscular Soreness in Female Gymnasts Following Isometric Contractions. International Sports Science Conference, Singapore, Congress Proceedings. p. 259-269, 1993.

Ascı, F., Gokmen, H., **Tiryaki, G,** Aşçı, A., Zorba, E. The Effects of Participation in Sports on Level of Satisfaction with Body Image of Male Students. Journal of Athletics Science and Technology. 4(3):38-47, 1993.

Tiryaki, G. and S. Koçak. (Translation.) Stride Length in Sprint Running II: Analysis and Evaluation. Journal of Athletics Science and Technology. 9:5-10, 1993.

Tiryaki, G. and G. Dogu. Weight Reduction of Wrestlers. Journal of Wrestling (Turkish Wrestling Foundation). 2:17, 1993.

Tiryaki, G., and S. Koçak. (Translation.) Stride Length in Sprint Running I: Analysis and Evaluation. Journal of Athletics Science and Technology. 8:21-24, 1992.

Zorba, E., **Tiryaki, G.,** Doğu, G. Development of a Skinfold Equation for Prediction of Body Fat in Turkish Wrestlers. International Health, Physical Education and Recreation World Congress, Limerick, Ireland,Congress Proceedings. p.138, 1991.

Tiryaki, G. Participation of Women in Long Distance Running. Journal of Onspor. 7(II-IV):30-31, 1991.

Tiryaki, G. Recent Approaches to Altitude Training. First Congress on Altitude and Sports University of Erciyes Press, Kayseri, Turkey: Congress Proceedings. p.71-87, 1991.

<u>UNPUBLISHED WORK</u> (Supported by Evidence)

Works accepted for publication:

<u>Peer Reviewed</u>

<u>Non-Peer Reviewed:</u>

Works submitted for publication:

<u>Peer-reviewed articles:</u>

Tiryaki- Sonmez, G., Vatansever, S., Olcucu, B. Satellite Cell, Muscle Hypertrophy and Exercise, Submitted to *Biology of Sports*, Submitted May 2016.

G., Vatansever, S., Olcucu, B., Tiryaki- Sonmez, G. Heat shock proteins response to exercise, *International Journal of Academic Research*, Submitted April 2016.

Works in progress:

- Tiryaki-Sonmez, G., Vatansever, S., Olcucu, B., Schoenfeld, B.J. The anti-oxidative and anti-inflammatory effects of Rosemary extract after long term high-intensity exercise on the immune and oxidative systems, International Journal of Preventive Medicine, June 2016.

- Sozbir, K., Tiryaki-Sonmez, G., Schoenfeld, B. The acute effects of drop jumps with different intensities on countermovement jump performance and lower extremity electromyography. Journal of Human Kinetics, March 2016.

1. The effects of exercise on obestatin hormone and food intake in obese and normal weight adults.

2. The effects of whole body vibration exercises on body composition markers in male athletes.

3. Effects different types of exercises on muscle strength and EMG activities

4. The effect of Pilates exercise on the levels of Salivary Cortisol and Salivary Alpha Amylase activity.

Grant writing in progress

1. The anti-oxidative and anti-inflammatory effects of Rosemary extract after acute high-intensity exercise on the immune and oxidative systems (NIH grant application)

2. Prevention of Childhood Obesity (NIH grant application)

GRANTS RECEIVED

a. Multiple

b. Individual

Grants received:

1. 2016-2017 Graduate Research Technology Initiative, State of New York. Exercise Science/Pre-physical Therapy, $37,599.

2. CUNY 2015-2016 Student Technology Fee Grant - Exercise Science/Pre-physical Therapy, $30,672.

3. 2014-2015 Graduate Research Technology Initiative, State of New York. Exercise Science/Pre-physical Therapy, $45,900.

4. PSC-CUNY 43 Research Award (2012)-The Effects of Resistance Exercise on Obestatin Hormone and Food Intake, City University of NewYork (CUNY), $3,200.

5. PSC-CUNY 42 Research Award (2011)-The Effects of Exercise on Obestatin Hormone and Food Intake, City University of NewYork (CUNY), $3,500.

6. Shuster Fellowship Award (2008) – The Effects of Exercise on the Level of Hormones Regulating Food Intake in Young Adults, Lehman College, CUNY. $ 4,000.

7. Scientific Research Funding, Project Director (2004-06) – Establishment of the Exercise Physiology Lab, Abant Izzet Baysal University, Bolu, Turkey. $150,000.

8. Turkish Soccer Foundation, (1996) - Conference Organization. $10,000

9. Turkish Scientific Research Foundation (1995) – Expenses for Attending a World Congress Sports Sciences in England. $2,000

10. Scientific Research Funding, Project Director (1992-94) - Physiological Effects of Altitude Training,

11. Middle East Technical University, Ankara, Turkey. $30,000.

Grants submitted, but not funded;

1. Designing and Testing a Mobile Gaming Application to Promote Healthy Food & Exercise Behaviors for Adolescents, NIH NIH-R21 APPLICATION, http://grants.nih.gov/grants/guide/pa-files/PA-11-329.html

2. The Effect of a Cooking and Exercise Program on the Body Mass Index of Children - Robert Wood Johnson Foundation (RWJF) in 2009.

3. A Comparison of School Lunches and Home Prepared Lunches on the Body Mass Index Level of children - PSC-CUNY in 2009

SERVICE TO THE COLLEGE

Chair of the Department of Health Science, July 2014-July 2017

Member of the College P&B Committee, July 2014-July 2017

The Senate Committee on the Budget and Long Range Planning - September 2015 -Present

Member of the Instructional support Services Program (ISSP) Advisory Committee 2011-present

Member of the Faculty Election Committee, 2008-Present

Member of the Foundations of Excellence "All Students" Dimension Committee, 2010-2011

SERVICE TO THE DEPARTMENT

Director of the Exercise Science Program, Department of Health Science at Lehman College, 2009-Present.

Developed the Undergraduate Program in Exercise Science Program with option of Pre-Physical Therapy and with option of Exercise and Movement Science, 2010- Present.

Developed the Undergraduate Program in Exercise Science Program in the Department of Health Science at Lehman College, 2007- Present.

Member of the Departmental P&B Committee. 2014-Present

Member of the Departmental Grade Appeal Committee, 2011- Present.

Advising more than 300 students majoring in Exercise Science- 2007- Present.

Prepared Internship Manual-2012

Chair of the Search Committee for a new faculty in Exercise Science Program, 2009-2013

Member of the Departmental Curriculum Committee, 2008-2014

Member of Search Committee for new faculty in different programs of the Department of Health Sciences at Lehman College, Spring 2008

SERVICE TO THE UNIVERSITY

- Member of Focus Group for Housing at CUNY, Spring 2008
- Representative of Department of Health Sciences in Open House of Lehman College, Fall 2007
- Representative of Department of Health Sciences in Open House of Lehman College, Spring 2013).

COMMUNITY SERVICE

- Volunteer to be a soccer coach for Riverdale Soccer club, Riverdale, Bronx, NY., 2007-2012

- Volunteer as Classroom Representative: PS 24, Riverdale, Bronx, NY. 2009-2013
- Volunteer as Learning Leader: PS 24, Riverdale, Bronx, NY. 2009-2013

MEMBERSHIP IN PROFESSIONAL SOCIETIES (last five years only)

- American College of Sports Medicine
- American Society of Exercise Physiologist
- International Network on Sport and Health Sciences

PROFESSIONAL ACTIVITIES

- Editor of International Journal of Sports, Exercise and Training Science, 2015-Present.
- Regional Editor in Journal of Biomedical Human Kinetics, University of Physical education, Warsaw, Poland. 2010- Present.
- Scientific Committee Member of *Olympic Sport and Sport for All* XXI International Congress, September 14-16, 2017.
- Scientific Committee Member of International Science and Football Conference, 24-25 March 2016, Qatar.
- Quantative Reasoning workshop-2011-2012
- Critical Thinking Assessment -2010- 2011
- Scientific Committee of 10th International Sport Sciences Congress, November 10-12, 2010, Antalya, Turkey.
- Scientific Committee of 15th Annual Congress of the European College of Sport Science, June 23-26, 2010, Antalya, Turkey.
- Writing Across The Curriculum- 2007-2008
- Writing Across The Curriculum, "Revamping Writing" Workshop, May 2015

- Writing Across The Curriculum, "Peer Review Boot camp" Workshop, April 2015
- Grant writing lecture presented by Dean Latimer, School of Health Sciences, Human Services, and Nursing at Lehman College; October 2014
- Preparation for Teaching Online: A Certification Workshop For CUNY Faculty, January, 2012

Andrew Alto

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EDUCATION

Doctorate of Education in Sport and Performance Psychology **(July 2017 to Present)**
Concentration-Sports and Exercise Science
University of Western States, Portland, OR

Master of Arts in Health Education and Promotion **December 2016**
City University of New York –Lehman College, Bronx, NY

Bachelor of Science in Exercise Science **May 2015**
City University of New York –Lehman College, Bronx, NY

Honors & Awards:

- Presidential Scholar (May 2014, May 2015)
- Degree Honors: Departmental Honors in Exercise Science
- Degree Honors: Magna Cum Laude
- Dean's List (May 2013)

SCHOLARLY PUBLICATIONS

- Schoenfeld, B.J., Contreras, B., Winkleman, N., Larson, R., Vigotsky, A., **Alto, A**., Golden, S. (In Progress). *Effects of attentional focus during resistance training on longitudinal muscular adaptations.*
- Schoenfeld, B.J., Contreras, B., **Alto, A**., Belliard, R. (In Progress). *Efficacy of a virtual reality training system on muscular adaptations and cardiorespiratory fitness.*

CONFERENCE PRESENTATIONS

- *"Functional and Preventative Aspects of Strengthening the Hip Flexor Muscles in Relation to Hip Fracture in the Elderly Population"* American College of Sports Medicine Regional Conference. New York, NY. November 7th 2015. 1st place winner for the undergraduate category.
- *"Hip Flexor Strengthening and Prevention of Hip Fracture in the Elderly Population; Literature review and practical implications".* Lehman College Annual Research and Scholarship Day. Bronx, NY. Honorable mention award for a scientific presentation.
- American College of Sports Medicine Regional Conference Student Bowl Participant. Queens, NY. April 2015.

CONTINUING EDUCATION

- *Performance Summit*- Juggernaut Training Systems. **February 2017**
- *4th Annual Rutgers Human Performance Conference* **April 2017**
- **Reviewer** **March 2017-Present**

Journal of Strength and Conditioning

PROFESSIONAL MEMBERSHIPS AND CERTIFICATIONS

- CPR/AED Certified by the American Heart Association **November 2014 – Present**
- NSCA- Certified Strength and Conditioning Specialist: ID: 7248050313 **December 2016-Present**
- American Society for Biomechanics, November 2014
- American College of Sports Medicine, June 2014
- National Strength and Conditioning Association, February 2013

PROFESSIONAL EXPERIENCE

Instructor (Exercise Science) **August 2017-Present**
Lehman College. **Bronx, NY**

Substitute Lecturer (Exercise Science) **August 2016 – Present**
Lehman College. **Bronx, NY**

Adjunct Lecturer (Exercise Science) **June 2016-July2016**
Lehman College, **Bronx, NY**

- Taught Introduction to Exercise Science to undergraduate students

Teaching Assistant (Exercise Science)
Lehman College, **Bronx, NY** **January 2016 – May 2016**

- Led lab activities in strength and conditioning testing
- Instructed students on proper lab techniques
- Educated students on the essentials in strength and conditioning testing
- Added evidence based information to class discussions and teaching

Head Research Assistant (Exercise Science)
Lehman College, **Bronx, NY** **February 2015 – May 2015**

- Recruited research participants based on specific criteria
- Supervised and instructed 7 other research assistants on proper training techniques
- Organized and led weekly group meetings to ensure the research is running optimally
- Trained research subjects based on the specific exercise protocol provided by the head researcher
- Educated and instructed assistants and subjects on proper lifting techniques and the essentials to remaining efficient and effective throughout the research

Research Assistant (Exercise Science)
Lehman College, **Bronx, NY** **August 2014 – December 2014**

- Fulfilled duties carried out in being a Head Research Assistant with the exclusion of supervising other assistants

- Developed daily reports for the Head Researcher based on the needs of the research and ways to keep it running optimally

Group Fitness Instructor/Workshop Leader
Lenox Hill Neighborhood House. **New York, NY** **October 2013 – April 2014**

- Constructed and led group fitness classes for members and guests of Lenox Hill
- Helped to develop and lead health workshops based on nutrition, fitness, health promotion and behavioral changes
- Developed and implemented weekly recreational trips for members in order to promote physical activity and mental health

Floor Trainer/Fitness Attendant
Riverdale YM-YWHA**, Bronx, NY** **February 2010 – June 2012**

- Supervised fitness room ensuring members were exercising safely and the gym was running efficiently at all times
- Educated and instructed members on proper use of equipment and recommended specific exercises and programs to help them achieve their goals
- Created and led group exercise classes for children ages 8-12
- Aided in the development and promotion of the Y yearly race to raise funds for infrastructure improvements and added member services

COURSE TAUGHT

- ***Introduction to Exercise Science (EXS 264):*** Orientation to the Field of Exercise Science, professional roles, nature, scope and significant of physical activity and exercise. Basic concepts of fitness and assessments as applied to individuals and unique groups.
- ***Behavioral Aspects of Physical Activity (EXS 265):*** Conceptual and theoretical frameworks for understanding the behavioral component of physical activity and exercise, and for developing intervention strategies for enhancing physical activity and exercise behavior.
- ***Kinesiology & Biomechanics (EXS 315):*** Study and application of anatomic and mechanical principles of human movement.
- ***Motor Learning and Control (EXS 316):*** Effects of psychological, social maturational, and neurophysiological factors on the learning and performance of movement patterns
- ***Exercise Physiology 1 (EXS 323):*** Human anatomy and physiology as related to physical activity, exercise, and work. Study of the nervous, endocrine, muscular, and cardiovascular systems. Factors that affect physiological function, energy transfer, and exercise performance.
- ***Exercise Testing and Prescription (EXS 326):*** Principles of fitness and the development of exercise programs to enhance health and/or human performances in a variety of settings. Methods of evaluating physiological adaptation to exercise using laboratory and field experiences.
- ***Exercise Physiology 2 (EXS 423):*** Human anatomy and physiology as related to physical activity, exercise, and work. Study of the nervous, endocrine, muscular, and cardiovascular systems. Factors that affect physiological function, energy transfer, and exercise performance.
- ***Theory and Methods of Strength and Conditioning (EXS 425):*** Strength production from a physiological, neurological, biomechanical, and bioenergetic perspective.

APPENDIX F

Qualifications for Human Performance and Fitness New Hire - Lecturer-Level Position

Position Description and Duties

- Teach graduate courses in Lehman College's Human Performance and Fitness program;
- Mentor and advise students in the program;
- Manage the program's action research project process;
- Assist with assessment and program development initiatives;
- Seek external funding for research and program improvements;
- Service to college, school and department;
- Participate in student recruitment, application and admissions processes; and
- Perform additional administrative duties for credit load assignment.
- Collaborate with faculty in the department on curricula, assessment, and department projects.
- Mentor students outside of the classroom (e.g. major's club, internships, and student-faculty collaborative research).

Qualifications Required

- Minimum master's degree in Exercise Science or a related field from an accredited institution;
- Experience in teaching graduate-level courses in exercise science;
- Experience in a lab, clinical, or professional setting directly related to exercise science.
- Current knowledge in technology, best practices, and recent trends in the exercise science field.
- Advanced fitness certification (e.g. Certified Strength & Conditioning Specialist) and professional affiliation is preferred.

APPENDIX G

References

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2. Dallmeyer S, Wicker P, Breuer C: How an aging society affects the economic costs of inactivity in Germany: empirical evidence and projections. Eur Rev Aging Phys Act (Germany), 14: 18-017-0187-1. eCollection 2017, 2017.

3. Flegal KM, Kruszon-Moran D, Carroll MD, Fryar CD, Ogden CL: Trends in Obesity Among Adults in the United States, 2005 to 2014. JAMA (United States), 315 (21): 2284-2291, 2016.

4. Flegal KM, Kit BK, Orpana H, Graubard BI: Association of all-cause mortality with overweight and obesity using standard body mass index categories: a systematic review and meta-analysis. JAMA (United States), 309 (1): 71-82, 2013.

5. Ogden CL, Carroll MD, Kit BK, Flegal KM: Prevalence of childhood and adult obesity in the United States, 2011-2012. JAMA (United States), 311 (8): 806-814, 2014.

6. Davison KK, Birch LL: Weight status, parent reaction, and self-concept in five-year-old girls. Pediatrics (United States), 107 (1): 46-53, 2001.

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16. Janssen I, Heymsfield SB, Ross R: Low relative skeletal muscle mass (sarcopenia) in older persons is associated with functional impairment and physical disability. J Am Geriatr Soc (United States), 50 (5): 889-896, 2002.

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