

Luke M. Pelton, PhD, ACSM-EP, CSCS

LUKE MATTHEW PELTON, PhD, ACSM-EP, CSCS

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lpelton@springfieldcollege.edu
(413) 748-4762

My professional mission is to educate others on the theoretical and applied principles of exercise science and physiology, to encourage a better understanding of scientific reasoning and logic, and to promote sound research practices.

EDUCATION

Doctorate of Philosophy in Exercise Physiology August 2023

Springfield College, Springfield, MA

Specialization: Sports Physiology

Advisor: Samuel A. E. Headley, PhD

Committee Chair: Nicholas Coker, PhD

Dissertation: The effects of anabolic-androgenic steroid use and training style on myogenic expression in trained male iron sport athletes

Master of Science in Sports Science December 2017

Hofstra University, Hempstead, NY

Concentration: Strength & Conditioning

Advisor: Jamie J. Ghigiarelli, PhD

Capstone Project: Effects of a 6-week bench press program using the freak bar in a sample of collegiate club powerlifters

Bachelor of Science in Exercise Science May 2014

Hofstra University, Hempstead, NY

Advisor: Katie M. Sell, PhD

ACADEMIC APPOINTMENTS

Springfield College, Springfield, MA Fall 2023-Present

Assistant Professor of Exercise Science, Department of Exercise Science

AEXS 319: Kinesiology & Biomechanics

AEXS 335: Measurement & Statistics in Exercise Science

AEXS 360: Exercise Testing & Prescription

AEXS 380: Foundations of Training for Health & Performance

AEXS 540: Sports Nutrition

AEXS 604: Neuromuscular Physiology & Exercise

AEXS 606: Environmental Physiology

AEXS 613: Exercise for Special Populations

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AEXS 620: Genetics for Exercise Science
AEXS 622: Functional Anatomy & Biomechanics
RSCH 610: Foundations and Methods of Research
HNRS 192: Honors Colloquium (*Fiction in Science*)

Human Performance Lab Coordinator

Fall 2024-Present

University of Hartford, West Hartford, CT

2022-2025

Adjunct Instructor, Department of Exercise Science

EX 315: Sports Nutrition
EX 360: Motor Control
EX 370W: Exercise Physiology
EX 380: Injury Care and Prevention
EX 421W: Exercise Prescription for Special Populations

CT State Community College, Manchester, CT

2020-2025

Adjunct Lecturer, Exercise Science Program

EXSC 2040: Exercise Physiology
EXSC 2050: Kinesiology

Smith College, Northampton, MA

Fall 2021

Adjunct Instructor, Department of Exercise and Sports Studies

ESS 509: Musculoskeletal Anatomy

Springfield College, Springfield, MA

Spring 2021

Adjunct Instructor, Department of Biology/Chemistry

BIOL 133: Anatomy & Physiology Concepts II Lab

Springfield College, Springfield, MA

2019-2023

Doctoral Teaching Fellow, Department of Physical Education and Health Education

RSCH 610: Foundations and Methods of Research
RSCH 612: Thesis Proposal Design
RSCH 618: Guided Individual Study
RSCH 620: Educational Psychology Statistics I
RSCH 712: Dissertation Proposal Design

Hofstra University, Hempstead, NY

2018-2019

Adjunct Instructor, Department of Health Professions

HPR 251: Special Reading Seminar
HPR 290: Scientific Foundations of Strength and Conditioning

Hofstra University, Hempstead, NY

2015-2019

Adjunct Instructor, Department of Specialized Programs in Education

PESP 025: Fitness for Life
PESP 038B: Weight Training
PESP 180N: Powerlifting

SCHOLARSHIP

Journal Publications

Hutchinson J, Murphy J, De Lucia B, O'Neill E, Curtis D, Mellano K, **Pelton L**, Coker N. Effects of preferred vs. nonpreferred music on bench press performance: A replication and extension study. *Communications in Kinesiology*, 2024;1(6). <https://doi.org/10.51224/cik.2024.60>

Pelton LM, McMahon E. The current state of the sports science field and careers. *NSCA Coach*, 2024;10(4):4-9.

Pelton, LM, Maris, SA, Loseke, J. The effects of anabolic-androgenic steroids on gene expression in skeletal muscle: A systematic review. *International Journal of Exercise Science*, 2023;16(3): 53-82. <https://doi.org/10.70252/qfny6413>

Pelton, LM, Mullin, EM. The relationship of anabolic-androgenic steroids and sexual health among male competitive strength athletes: 1138. *Medicine & Science in Sports & Exercise*, 2021;53(8S):368.

Ghigiarelli JJ, Fulop AM, Burke A, Ferrara A, Sell KM, Gonzalez AM, **Pelton LM**, Zimmerman JA, Coke S, Marshall D. The effects of whole-body photobiomodulation light-bed therapy on creatine kinase and salivary interleukin-6 in a sample of trained males: A randomized, crossover study. *Frontiers in Sports and Active Living*, 2020. <https://doi.org/10.3389/fspor.2020.00048>.

Ghigiarelli JJ, **Pelton LM**, Gonzalez AM, Fulop AM, Gee JY, Sell KM. Effects of a 6-week bench press program using the freak bar in a sample of collegiate club powerlifters. *Journal of Strength and Conditioning Research*, 2018;32(4):938-949.

Manuscripts Under Review

Bakhshinejad JA, Ramer JD, Dunsmore KA, **Pelton LM**, Berglund L. Effects of intensity and fatigue on the kinetics and kinematics of the barbell squat, bench press, and deadlift in experienced lifters: A systematic review. *Sports Medicine - Open*.

Conference Presentations

Pelton LM, Coker N, Mullin EM, Fields J. (2025). Effects Of Steroid Use And Training On Myogenic Expression In Trained Male Iron Sport Athletes. Poster presentation. Presented at: 2025 ACSM Annual Meeting.

Pelton LM, Futch G. (2024). Forming Cross-Bridges: Discrepancies Between Research and Applied Practice in Muscular Performance. Colloquium Lecture. Presented at: 2024 NEACSM Fall Conference.

Pelton LM. (2023). In the Lab vs. In the Trenches: Evidence vs. Anecdote. Tutorial lecture. Presented at: 2023 NEACSM Fall Conference.

Pelton LM, Fields J, Nitzsche E, Pelton JA. (2022). Impacts of cannabis use timing, biologic gender, and iron sport participation on perceived recovery. Presented at: 2022 NEACSM Fall Conference.

Pelton LM, Mullin EM. (2021). The relationship of anabolic-androgenic steroids and sexual health among male competitive strength athletes. Poster presentation. Presented at: 2021 ACSM Annual Meeting, virtual.

Ambord, M., Hauch, E., Baker, G., **Pelton, L.**, Stenson, M. (2021). The Predictive Relationship Between Training Impulse, Sleep Quality, and Sleep Quantity. Presented at: 2021 American College of Sports Medicine Northland Chapter Spring Tutorial, Virtual. *1st Place, Outstanding Undergraduate Research Award.*

Berglove, M., **Pelton, L.**, Stenson, M. (2021). Changes in Training Load and Perceived Health Across a Division III Women's Basketball Season. Presented at: 2021 American College of Sports Medicine Northland Chapter Spring Tutorial, Virtual. *3rd Place, Outstanding Undergraduate Research Award.*

Reding, J., Miller, J., **Pelton, L.**, Stenson, M. (2021). The Relationship Between Sleep Quality and Quantity and Muscle Readiness, Stress, and Overall Health in College Athletes. Presented at: 2021 American College of Sports Medicine Northland Chapter Spring Tutorial, Virtual. *2nd Place, Outstanding Undergraduate Research Award.*

Schabaker, A., **Pelton, L.**, Stenson, M. (2021). Perceived Stress, Energy, and Mood State During High and Low Stress Academic Weeks in Division III Female Athletes. Presented at: 2021 American College of Sports Medicine Northland Chapter Spring Tutorial, Virtual.

Funding

Pelton LM. Springfield College Scholarship Empowerment Grant (Spring 2025). \$1,385 [Funded].

Pelton LM. The impact of hormonal replacement therapy on motor unit characteristics in older postmenopausal females. American College of Sports Medicine, New England Chapter New Investigator Award (2024). \$5,000 [Not funded].

Whiton TK, **Pelton LM**, Tardif E, Burnham A, Goff B, Mourmouras M. The correlation between low energy availability risk and force plate biomechanical characteristics of division III collegiate athletes. Co-Principal Investigator. National Strength & Conditioning Association Directed Research Grant (2024) [Not funded].

Pelton LM, Coker N, Mullin EM, Fields J. The effects of anabolic-androgenic steroid use and

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training style on myogenic expression in trained male iron sport athletes. Student Investigator. Springfield College Graduate Research Fund (2023). \$2,000 [Funded].

Pelton LM, Maris SA, Headley SAE. The effects of ground-based resistance exercise and simulated microgravity on muscle strength and gene expression. Student Investigator. American College of Sports Medicine NASA Space Physiology Research Grant (2021). \$5,306 [Not funded].

Editorial Contributions

Journal of Strength & Conditioning Research, MS #JSCR-08-23209, “Characterization of Sports Science Professionals Working in the Premier League, Bundesliga, La Liga, Australian A league and Major League Soccer.”

International Journal of Sports Science and Physical Education, MS #2551545, "Anxiety and Marital Satisfaction among Working women and Homemakers with Menstrual Disorders."

International Journal of Exercise Science, MS #4240 “Evaluating the Intra-Rater and Inter-Rater Reliability of a Novel Prototype Portable Tension Neck Strength Assessment Device” [Peer Review]

International Journal of Sports Science and Physical Education, MS #2870461”Physical Discomfort and Remedial Actions for Pain Management of Female Students of Surkhet Multiple Campus During the Time of Menstruation” [Peer Review]

American Physiological Society Virendra B. Mahesh Award of Excellence in Endocrinology & Metabolism (2025) applications [Award Review]

International Journal of Sports Science and Physical Education, MS #2351157 “PCOS in the Eye of Serum Prostate-specific Antigen among Nigerian Females” [Peer Review]

International Journal of Exercise Science, MS #4216 “The Effect of Low-Intensity Resistance Training With Slow Movement and Tonic Force Generation on Neuromuscular Activity” [Peer Review]

American Physiological Summit 2023. American Physiological Society: Endocrinology & Metabolism Section. [Abstract Reviewer]

Kriel Y, Kerherve H, Askew C, Solomon C. Sprint interval training recovery format: Enjoyment & blood pressure in inactive men. *Journal of Clinical Exercise Physiology*. [Aided in peer review]

Student Research Supervision

Springfield College Department of Exercise Science, Springfield, MA

2023-Present

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Doctoral Dissertation Supervision:

Valderrama Rico, Leon Andres. TBD. [Content expert]

Lopatofsky, Eric. TBD. [Committee chair]

Masters Thesis Supervision:

Ohlmaier, M. “Comparing athletic identity between female bodybuilders and collegiate athletes.”
Defended Spring 2024. [Content expert]

Negrete, D. “Vasomotor tone response to caffeine.” Defended Spring 2025. [Content expert]

Qi, Yuxuan. “The arterial stiffness for bilateral and unilateral lower body resistance exercise.”
Defending Summer 2025. [Content expert]

Battisti, K. “Does the menstrual cycle phase mediate the effects of exercise on sleep quality?”
[Content expert]

Lamagdelaine, L. “The effectiveness of in-water and combination warm-ups for front crawl
performance in competitive swimmers.” [Content expert]

Brownstein, Sarah. “Changes in biomechanical test scores across a season of NCAA Division III
varsity athletics.” [Statistician]

Courchesne, Olivia. TBD. [Committee chair]

Tumulty, Maura. TBD. [Committee chair]

Nardini, Maggie. TBD. [Content expert]

Kelly, Molly. TBD. [Statistician]

Undergraduate Student Supervision:

Crevier, Zachary & Theberge, Garrett. “Review of the chronic effects of blood flow restriction
training programs on athletes.” Poster presented at: Springfield College 2025 Scholars in
Action; NEACSM Spring 2025 meeting.

PROFESSIONAL SERVICE & VOLUNTEER WORK

American College of Sports Medicine, New England Chapter
Member-at-Large

2025-Present

Springfield College Department of Exercise Science

Spring 2025

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| Faculty search committee [Member] | |
| American Society of Biomechanics Regional Meeting Award Applications [Application review] | Fall 2024 |
| American College of Sports Medicine, New England Chapter Fall Meeting College Bowl Official Scorekeeper | Fall 2024 |
| American College of Sports Medicine, New England Chapter Fall Meeting Abstract Review | Fall 2024 |
| Springfield College School of PEPSL, Springfield, MA Independent Study reader & evaluator | Spring 2024, Summer 2024 |
| Springfield College Department of Exercise Science and Athletic Training Undergraduate admissions open house volunteer | 2023-2024 |
| American College of Sports Medicine, New England Chapter Co-Chair, Marketing & Communications Committee | Fall 2023-Present |
| American College of Sports Medicine, New England Chapter Fall Meeting Speaker Introduction | Fall 2022, Fall 2023 |
| American College of Sports Medicine, New England Chapter Fall Meeting Session Moderator | Fall 2022 |
| Springfield College Exercise Physiology, Springfield, MA Social Media Manager Program Apparel Manager | 2020-Present |
| Springfield College Graduate Student Organization, Springfield, MA Vice President | 2021-2022 |
| American College of Sports Medicine, New England Chapter Student Representative | 2021-2023 |
| Springfield College Office of Academic Affairs, Springfield, MA Evaluator, Scholars in Action Day | 2021, 2024, 2025 |
| Clinical Exercise Physiology Association Panel Introducer, CEPA Online Fall 2021 Conference Panel Introducer, CEPA Online Fall 2020 Conference | Fall 2020, 2021 |
| Springfield College Peer Mentor Research Program, Springfield, MA Doctoral Research Peer Mentor | 2019-2023 |

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| School of PEPSL, Springfield College , Springfield, MA Co-Director, Graduate Research Peer Mentoring Program | 2019-2023 |
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| Revolution Powerlifting Syndicate Teen and Junior Advisor | 2017-2019 |
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| Hofstra University Faculty Research Day , Hempstead, NY Presenter | Fall 2017 |
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| Learning Exercise and the Right Nutrition , Baldwin, NY Receptionist | Spring 2013 |
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HONORS AND AWARDS

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| International Travel Award for the 2025 IUPS Congress American Physiological Society | 2025 |
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| Tracy Gibbons Leadership Fellow Center for Excellence in Teaching, Learning, and Scholarship | 2025 |
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| Higher Education Innovation Fund Grant Massachusetts Department of Higher Education | 2024 |
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| Faculty Writing Fellow Center for Excellence in Teaching, Learning, and Scholarship | 2024 |
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| NSCA Legacy Scholarship Recipient National Strength and Conditioning Association | 2022 |
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| PRIDE Talks Initiative Springfield College Graduate Student Association | Spring 2021 |
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| Doctoral Teaching Fellowship Springfield College School of Physical Education, Performance, and Sport Leadership | 2019-2023 |
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| Graduate with Distinction Hofstra University | Fall 2017 |
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| Graduate Physical Education Scholarship Hofstra University, Department of Specialized Programs in Education | 2016-2017 |
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| Graduate Assistantship Hofstra University, Office of Graduate Admissions | Fall 2014 |
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| Magna cum Laude | Spring 2014 |
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Hofstra University

Dean's List

2010-2014

Hofstra University

PROFESSIONAL TRAINING

Medical Neuroscience

(IP)

Duke University

Human Subjects Research: Basic Course

2021

CITI Program

Preventing Harassment & Discrimination

2021

Springfield College

Sexual Assault Prevention for Graduate Students

2020, 2021

Springfield College

CERTIFICATIONS

Certified Exercise Physiologist

2025

American College of Sports Medicine

Certified Strength and Conditioning Specialist

2015

National Strength and Conditioning Association

Certified Instructor of Sports Nutrition (Inactive)

2016

International Society of Sports Nutrition

Behavior Change Specialist

2018

National Academy of Sports Medicine

Corrective Exercise Specialist

2017

National Academy of Sports Medicine

Certified Personal Trainer (Inactive)

2013

National Strength and Conditioning Association

PROFESSIONAL AFFILIATIONS

Society for Transparency, Openness and Replication in Kinesiology (STORK)

2025-Present

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| American Society of Biomechanics | 2024-Present |
| Human Enhancement Drugs Network | 2023-Present |
| American Physiological Society | 2021-Present |
| Clinical Exercise Physiology Association | 2020-Present |
| American College of Sports Medicine | 2019-Present |
| American College of Sports Medicine (New England Chapter) | 2019-Present |
| National Academy of Sports Medicine | 2017-Present |
| International Society of Sports Nutrition | 2016-Present |
| National Strength and Conditioning Association | 2013-Present |
| Aerospace Physiology Society | 2020-2022 |
| Aerospace Medical Association | 2020-2022 |

OTHER PROFESSIONAL EXPERIENCE

Guest Presentations

Pelton LM. (2022). Is bodybuilding a sport?

Presented to: PHIL 120: Philosophy of Sport, Springfield College, Springfield, MA.

Pelton LM. (2021). Ad astra: Bringing space physiology to Springfield College.

Presented to: Springfield College Graduate Student Organization PRIDE Talks Initiative, Springfield College, Springfield, MA.

Pelton LM. (2021). The physiology of aging: Staying healthy in your senior years.

Presented to: Springfield College Campus Recreation Employee Wellness Programs, Springfield College, Springfield, MA.

Pelton LM. (2018). Applying corrective exercise to competitive powerlifting.

Presented to: HPR 170H: Corrective Exercise, Hofstra University, Hempstead, NY.

Pelton LM. (2017). Applying corrective exercise to competitive powerlifting.

Presented to: HPR 170H: Corrective Exercise, Hofstra University, Hempstead, NY.

Pelton LM. (2016). Periodization for powerlifting.

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Presented to: HPR 293: Scientific Foundations of Strength and Conditioning, Hofstra University, Hempstead, NY.

Pelton LM. (2016). The Westside Barbell conjugate powerlifting method.

Presented to: HPR 292: Strength and Conditioning Techniques, Hofstra University, Hempstead, NY.

Scientific Content

University of Hartford, West Hartford, CT Fall 2023

Sports nutrition consultant, “Hydration and sport nutrition education for Division III athletes”

ExPhysCast, East Hartford, CT 2021-2022

Podcast Co-host

National Strength and Conditioning Association, Colorado Springs, CO Spring 2022

Sports Science Intern

Zachracowperformance.com 2020

Contributing Writer

Clinical Work

Baystate Cardiology, Baystate Health, Springfield, MA Fall 2021

Cardiac Rehabilitation Clinical Exercise Physiology Intern

Sportscare Physical Therapy, Farmingdale, NY Spring 2017

Physical Therapy Aide

Coaching

Strong for Life Co., Remote 2022-Present

Head Powerlifting Coach

Head of Coaching Education 2025-Present

Springfield College Team Ironsports, Springfield, MA Fall 2022-Spring 2023

Strength & Conditioning Coaching Intern

Black Squirrel Strength & Conditioning, LLC, East Hartford, CT 2019-2020

Owner, Head Coach

Hofstra University Continuing Education, Hempstead, NY 2017-2018

Sports Strength & Conditioning Camp Instructor

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| Professional Athletic Performance Center , Garden City, NY Performance Coach | 2015, 2018-2019 |
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| Hofstra University Department of Campus Recreation , Hempstead, NY Powerlifting Club Head Coach | 2014-2019 |
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| Hofstra University Athletics , Hempstead, NY Strength & Conditioning Intern | Spring 2014 |
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| Learning Exercise and the Right Nutrition , Baldwin, NY Personal Trainer | 2013-2014 |
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| Camp Twin Creeks , Marlinton, WV Activity Specialist | Summer 2011 |
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Other Experience

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| Hofstra University Dep't of Health Studies and Kinesiology , Hempstead, NY Administrative Assistant | 2013-2014 |
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| Hofstra University Center for University Advisement , Hempstead, NY University Tutorial Program Student Tutor Anatomy & Physiology, Biology in Society, Exercise Physiology | Fall 2013 |
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| The Vitamin Shoppe , Garden City, NY Health Enthusiast | 2012-2013 |
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COMMUNITY SERVICE

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| Springfield College Team Ironsports , Springfield, MA \$806 Bench Press for Breast Cancer fundraiser event Breast Cancer Research Foundation | 2022 |
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| Springfield College Campus Recreation , Springfield, MA \$1,005 Bench Press for Breast Cancer fundraiser event Breast Cancer Research Foundation | 2021 |
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| Protectors of Animals , South Windsor, CT Wedding favor donation | 2020 |
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| Hofstra Campus Recreation , Hempstead, NY Thanksgiving Food Drive | 2018 |
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| Revolution Powerlifting Syndicate , Royersford, PA Thanksgiving Pet Shelter Drive | 2017 |
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Snatch and Rescue, Freeport, NY
\$500 Fundraiser

2015

EXTRACURRICULAR ACTIVITIES

Reddit.com
Moderator, /r/exercisescience

2021-Present

Hofstra University Powerlifting Club, Hempstead, NY
Club Founder, Captain, President

2013-2014

LABORATORY TECHNIQUES

Muscular strength/power assessment

- Biodex isokinetic dynamometer
- Delsys Trigno EMG
- Handgrip dynamometer
- Accupower Force platform
- VALD ForceFrames
- 1RM Testing (ACSM/NSCA)
- YMCA
- LESS Landing Scale

Biomechanics

- Goniometry

Cardiovascular measurements

- 12-Lead ECG
- Cardiovascular Impedance
- Blood Pressure w/sphygmomanometer
- Pulse Wave Velocity w/sphygmoCor
- Ankle-Brachial Index (ABI) w/doppler ultrasound (Balke protocol)

Graded exercise testing

- Bruce protocol
- Cycle ergometry

Functional testing

- 6-minute walk test
- Get-up and go test
- Berg balance test
- Sit-to-stand test
- Functional reach test

Body composition assessment

- Tanita Digital Scale
- Skinfold measurements w/calipers
- Circumference measures

- BodPod

Calibration

- Treadmill
- Cycle ergometer
- Metabolic cart
- Automated sphygmomanometer
- ECG
- Scale
- Spirometer
- BodPod

Biochemistry Techniques

- Blood processing
- ELISA