USARIEM Research Opportunities

Benefits of USARIEM Internships

- World class facilities
- Learn all aspects of the research process
- Exposure to applied and basic research
- Acquire new skills
- Wide variety of human performance related protocols
- Develop career-long relationships
- Flexible hours and dates
- Close to Boston & accessible by public transportation

Internship Programs

- Available all semesters
- For credit or non-credit
- Paid or unpaid
- Variable or fixed length
- Must be a U.S. Citizen

Careers at USARIEM

- Research Scientists
- Research Support Staff
- National Research Council Post-Doctoral Fellowships
- Military Positions
- Research Student Internships

USARIEM Warfighter Health & Performance

USARIEM

The Department of Defense's Premier Institution for Environmental and Exercise Physiology Research

Internship program application due dates:
Winter/Spring Semester,
December 10
Summer, April 1
Fall, July 15

For more information or to apply, send resume and cover letter to:
USARIEM
Human Resources Department
Kansas Street, Building 42
Natick, MA 01760-5007
Tel: 508-233-5137
email: usariem.hr@amedd.army.mil

USARIEM Warfighter Health & Performance

Visit Our Web Site: **www.usariem.army.mil**

United States Army Research Institute of Environmental Medicine

Research Opportunities

Internships
Post-Doc Programs
Career Development

The Department of Defense's Premier Institution for Environmental and Exercise Physiology Research

USARIEM Warfighter Health & Performance

United States Army Research Institute of Environmental Medicine

USARIEM is an internationally recognized center of excellence for Warfighter performance science and its useful applications. The institute functions as a world-class laboratory for environmental medicine, physiology, performance and nutrition research. It features integrated cellular, tissue, & human research programs.

Key Products

Performance Optimization Doctrine: USARIEM produces training policy and guidelines that provide recommendations to enhance Warfighter capabilities and reduce health risks.

Preventive Medicine & Planning Doctrine: USARIEM produces preventive medicine guidelines to minimize Warfighter injuries and reduce lost duty time and medical costs.

Materiel Development Support: USARIEM recommends product improvements for clothing, equipment, nutrition and pharmaceuticals by providing design specifications to improve individual Warfighter equipment and rations.

Monitoring Strategies & Predictive Algorithms: USARIEM develops strategies for personal physiological status monitoring and a variety of algorithms to prevent and detect Warfighter performance decrements.

Health Hazard Assessment: USARIEM coordinates with the Center for Health Promotion and Preventive Medicine (CHPPM) for thermal and hypoxic conditions.

USARIEM Research Areas

Biophysics & Biomedical Modeling

Develop and validate biomedical models to predict the effects of heat, cold, high altitude, hydration, and clothing systems and equipment on Warfighter performance.

Clothing Biophysics • *Biomedical / Predictive Modeling* • *Physiological Monitoring*

Military Nutrition

Conduct research and provide policy on nutritional issues affecting service members, and supports the Surgeon General's responsibilities as the Department of Defense executive agent for nutrition. Evaluates new rations and examines the interactions between nutrition, performance and the environment.

Bioenergetics & Metabolism • *Healthy Weight Management* • *Combat Ration Testing*

Military Performance

Conduct research to enhance the performance (physical, cognitive, behavioral and psychomotor) of military occupational tasks, or to prevent performance decrements due to physical overload, nutritional deprivation, environmental and operational stresses, and musculoskeletal injuries.

Physical Training / Human Performance Optimization • *Musculoskeletal Injury Reduction* • *Military Biomechanics Research* • *Cognitive Performance, Decision-Making & Judgement* • *Injury Epidemiology* • *Deployment Health Protection*

Thermal & Mountain Medicine

Conduct research to sustain and enhance performance (physical and cognitive) and minimize medical problems associated with military operations at environmental extremes (heat, cold & high terrestrial altitude). In addition, research supports military materiel developers of clothing, equipment, food and pharmaceuticals.

Heat Stress Physiology • *Cold Stress Physiology* • *High Altitude Physiology* • *Environmental Illness* • *Hydration*

Location/Facilities

USARIEM is co-located at the Soldier Systems Center in Natick, Massachusetts. A short distance from Boston, the institute offers researchers its own unique facilities and is in close proximity to many of the finest universities.

Unique Facilities

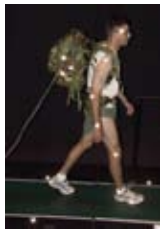
- Hypobaric Chambers *(9,000m, -15°C to 40°C)*
- Environmental Chambers *(-10°C to 50°C)*
- Water Immersion Laboratory *(5°C to 45°C)*
- Biomechanical Laboratory
- Human Exercise Physiology Laboratories
- Laser and Flow Cytometer Laboratory
- Pikes Peak Research Facility, CO
- Metabolic Kitchen
- Body Composition Laboratory
- Warfighter Cognitive Performance Lab
- USARIEM / Womack Medical Research Facility, Ft. Bragg, NC

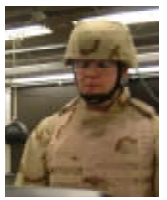
Environmental Physiology Research

- Hot, cold and high terrestrial altitude environments
- Acclimatization, performance and environmental injury
- Heat exchange & clothing biophysics
- Predictive modeling & physiological monitoring

Occupational Medicine & Performance Research

- Warfighter performance – physical / cognitive
- Nutrition and metabolism
- Injury epidemiology
- Biomechanics
- Bone health





USARIEM
Warfighter Health & Performance