

Area of research (title)	Natural Sciences
Field of research (title)	Biology (N 010)
Topic of research	MONITORING WORKLOAD, FATIGUE, RECOVERY, AND READINESS TO PERFORM DURING INTENSIFIED MILITARY TRAINING
Institution	Lithuanian Sports University

Potential supervisor

Pedagogical and scientific degree	Name, surname	Academic position
PhD	Inga Lukonaitienė	Lecturer, researcher

Short reasoning of proposed dissertation topic

Title
MONITORING WORKLOAD, FATIGUE, RECOVERY, AND READINESS TO PERFORM DURING INTENSIFIED MILITARY TRAINING
Soldiers and elite athletes both experience high physical loads, but their readiness profiles differ: athletes peak for competition, while soldiers must sustain consistent readiness under prolonged, unpredictable stress (Kellmann et al., 2018; Lieberman et al., 2002). Military personnel are exposed to cumulative fatigue from physical exertion, limited sleep, cognitive demands, and environmental extremes (Granlund et al., 2023). This research adapts scientifically established athlete workload monitoring approaches (Lukonaitienė et al., 2021) for military application, integrating internal and external load indicators to assess fatigue and readiness during intensified training. Traditional recovery methods (e.g., sleep, breathing techniques) will be compared with innovative strategies, such as vagus nerve stimulation (Porges, 2018), under real-world military conditions. Given the significant variability in recovery timelines for physiological and performance markers following strenuous military training (Granlund et al., 2023), individualized monitoring strategies are essential to sustain operational readiness.