

Tactical Strength and Conditioning Facilitator Job Task Analysis Summary

On behalf of the NSCA, ACS Ventures, LLC (ACS) conducted a job task analysis study (JTA) for the Tactical Strength and Conditioning Facilitator (TSAC-F) certification during November 2022, in Colorado Springs, CO. The meeting was held over a 2-day period and involved twelve subject-matter experts (SMEs) from the various disciplines across the tactical strength and conditioning community (i.e., military, fire, law enforcement). The purpose of this study was to review the job role of a TSAC-F and update the detailed content outline (DCO) for the TSAC-F program.

The study was conducted in three phases. The first phase, a meeting with the panel of SMEs convened to discuss the expectations a TSAC-F was responsible for in an organizational framework. The second phase, NSCA and ACS worked together to construct a survey to be distributed to TSAC-F professionals working in the field to gain feedback on the tasks listed in the DCO. In the third and final phase, the responses of the survey were collected and analyzed to determine importance of each task. These measures were then used to update the DCO of the TSAC-F examination.

New Detailed Content Outline (DCO) Date Effective: **February 1, 2024.**

- All exams administered **before** February 1, 2024, will follow the existing DCO.
- All exams administered **on or after** February 1, 2024, will follow the NEW DCO (Pages 2-14)
- It is possible to register for the TSAC-F examination and study from the old DCO but take the exam when the new DCO becomes active. Please be conscious and aware of this if you register for the exam in the Fall 2023.

Changes to the TSAC-F DCO (blueprint):

The TSAC-F DCO remained almost identical to the current one, the major changes were a rearrangement of the Domains and the addition of some key tasks:

TSAC-F DCO Changes:

Domain 4: Assessment and Evaluation (previously Domain 5)

Domain 5: Program Design (previously Domain 4)

Domain 6: Wellness Intervention (previously Domain 7)

- 6E. Understand Basic Resiliency and Coping Skills (previously under the Program Design domain)

Domain 7: Organization and Administration (previously Domain 6)

- Addition of Task 7.E. Identify Metrics that Show Program Effectiveness
- Addition of Task 7.F. Understand the Role of the Interdisciplinary Performance Team



Updated TSAC-F Scientific Foundations Detailed Content Outline

(effective beginning February 1, 2024):

Domain / Task	Recall	Application	Analysis	Total
I. EXERCISE SCIENCES	7	13	6	26
A. Apply Basic Concepts of Anatomy and Physiology to Describe Responses to Exercise and Occupational Job Tasks Under Load.				
1. Muscle anatomy (e.g., muscle group names, specific muscle names)				
2. Bone and connective tissue anatomy				
3. Cardiopulmonary anatomy				
B. Apply Basic Concepts of Neuromuscular Anatomy and Physiology to Describe Responses to Exercise				
1. Neuromuscular anatomy (e.g., motor unit, Type I and II fibers, muscle spindles, stretch shortening cycle, Golgi tendon organs)				
2. Neuromuscular responses to exercise (e.g., chronic neuromuscular adaptations, motor unit recruitment patterns, nerve conduction, summation)				
C. Apply the Basic Principles of Biomechanics to Exercise Selection Relative to Occupational Job Tasks				
1. Kinetic laws and principles of movement (e.g., lever systems, momentum, work, isometric/isotonic/isokinetic)				
2. Kinematic laws and principles of movement (e.g., velocity, anatomical planes of movement, joint angles)				
3. Relationship of type of muscle action (i.e., isometric, concentric, and eccentric) to force production (i.e., force-velocity and torque-velocity relationships)				
4. Muscle dynamics and the role of muscles in movement (e.g., agonist, antagonist, synergist, stabilizer)				



6. Effects of apparel selection and impacts on thermoregulation				
II. NUTRITION	5	4	1	10
A. Explain Nutritional Factors Affecting Health and Performance				
1. Health-related and performance-related application of food (e.g., food groups, food exchanges, ChooseMyPlate.gov, nutrient density)				
2. Basic nutritional needs of tactical populations (e.g., proteins, carbohydrates, fats, vitamins, minerals)				
3. Chronic disease risk factors associated with dietary choices				
4. Effects of fluid and electrolyte balance/imbalance on health and performance				
5. Effects of unpredictable and/or prolonged schedules during deployment, field exercise, and shift work on nutritional status				
B. Explain Nutritional Strategies for Optimizing Body Composition and Maximizing Physical Performance and Recovery				
1. Timing and composition of nutrient and fluid intake before, during, and after an exercise session, operation, mission, or shift				
2. Nutritional factors that affect muscular endurance, hypertrophy, strength, and aerobic endurance				
3. Nutrition strategies to mitigate unpredictable and/or prolonged schedules during deployment, field exercise, and shift work				
C. Recognize Adverse Signs, Symptoms, and Behaviors Associated with Eating Habits that Indicate the Need for Referral to a Registered Dietician				
D. Explain the Benefits, Risks, and Proper Use of Common Dietary Supplements and Ergogenic Aids (e.g., creatine, protein, caffeine, steroids)				
1. Benefits and side effects of dietary supplement use				
2. Understand the lack of supplement regulation and benefit of third-party testing				



III. EXERCISE TECHNIQUE	6	13	7	26
A. Teach Safe and Effective Exercise Techniques				
1. Preparatory body and limb position (e.g., stance, posture, alignment)				
2. Execution of technique (e.g., body and limb positions, movement mechanics, breathing)				
3. Identification and correction of improper exercise technique				
4. Spotting				
B. Explain a Dynamic Warm-Up that is Specific to the Prescribed Exercise Plan				
C. Explain Resistance Training Exercise Modes				
1. Free weight training equipment				
2. Resistance machines				
3. Bodyweight resistance (e.g., proprioception, functional movement)				
4. Alternative Implements (e.g., rope climbing, sleds, load carriage)				
D. Explain Plyometric Exercise Techniques				
E. Explain Speed/Sprint Technique with and without Load				
1. Recognize the difference between acceleration and maximal speed and their application				
F. Explain General Agility Techniques				
1. Reactive multidirectional movement to include stopping, starting, dropping, and rising				
2. Explain the difference between change of direction and agility				
G. Explain Anaerobic and Aerobic Endurance Exercise Modes				
1. Cardiovascular exercise modes (e.g., machine and non-machine)				



2. Occupational-specific activities (e.g., load carriage)				
H. Explain Flexibility and Mobility Exercise Modes				
1. Static stretching exercises				
2. Proprioceptive neuromuscular facilitation (PNF) stretching				
3. Dynamic and ballistic stretching exercises				
4. Myofascial release (e.g., foam rolling)				
IV. ASSESSMENT AND EVALUATION	4	9	4	17
A. Administer Assessments				
1. Identify assessments used by tactical organizations (e.g., physical fitness tests, job suitability tests, fitness for duty test)				
2. Select and explain assessments based upon the unique occupational demands, administrator and equipment availability, time constraints, and training status				
3. Develop alternative assessments and make reasonable accommodations based on individual capabilities and limitations				
4. Establish a plan for frequency of assessment				
5. Administer occupationally-specific assessment protocols and procedures to ensure accurate and reliable data collection				
B. Evaluate Assessment Results				
1. Interpret individual and group assessment performance				
2. Use assessment results to design or modify training programs				
3. Evaluate assessment results to show programmatic progress				
V. PROGRAM DESIGN	8	10	9	27
A. Perform a Needs Analysis Based on Job Requirements				
1. Identify critical job tasks				





E. Identify Need for Recovery and Appropriate Modes				
1. Passive versus active recovery				
2. Individualized recovery methods (e.g., alternative workouts, cryotherapy, percussive therapy, massage, meditation)				
VI. WELLNESS INTERVENTION	5	7	2	14
A. Describe Advantages of Performing Various Types of Physical Activities				
B. Describe the Benefits of Intentional Application of Recovery Strategies (e.g., passive and active, sleep hygiene)				
C. Describe and Mitigate Risk Factors Associated with Common Chronic Injuries/Diseases within Tactical Populations				
D. Understand How Lifestyle and Occupational Stress Affects Health Wellness, and Performance				
E. Understand Basic Resiliency and Coping Skills (e.g., goal setting, motivational techniques, mental imagery, emotional regulation)				
VII. ORGANIZATION AND ADMINISTRATION	2	6	2	10
A. Understand the Organization and Flow of the Training Area				
1. Identify specific space and equipment needs of the population(s) that will use the training area				
2. Apply strategies to arrange and space the equipment within the training area				
B. Execute Policies and Procedures for the Training Area				
1. Recognize the primary duties and responsibilities of the various personnel in the training area				
2. Enforce rules for using the training area based upon current industry best practices and organizational guidelines				
C. Create and Ensure a Safe Training Environment				
1. Identify pre-participation screening and medical referral requirements for program participants				
2. Establish checklists and schedules for equipment maintenance and cleaning				





3. Identify and mitigate common risks within the training environment.				
4. Follow procedures to respond to emergencies				
5. Maintain appropriate training records				
6. Identify needs and strategies to accommodate dynamics/logistics of training large groups (e.g., limited equipment, experience level of the tactical population, supervision of training)				
D. Understand Professional and Legal Responsibilities				
1. Identify common litigation issues and methods for reducing and/or minimizing the risk and liability				
2. Know when to refer an individual to and/or seek input from appropriate health care professionals (e.g., chronic disease, eating disorder behavior, supplement use, injury, pain, behavioral health issues)				
E. Identify Metrics that Show Program Effectiveness (e.g., establish key performance indicators [KPIs], program participation, cost savings, impact on population performance or health)				
F. Understand the role of the interdisciplinary performance team				
Totals	37	62	31	130

