Certified Performance and Sport Scientist Job Task Analysis Summary

On behalf of the NSCA, ACS Ventures, LLC (ACS) conducted a job task analysis study (JTA) for the Certified Performance and Sport Scientist (CPSS) certification during January 2025, 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 sport science community (i.e., collegiate, academic, professional). The purpose of this study was to review the job role of a CPSS and update the detailed content outline (DCO) for the CPSS program.

The study was conducted in three phases. The first phase, a meeting with the panel of SMEs convened to discuss the expectations the CPSS was responsible for in an organizational framework. The second phase, NSCA and ACS worked together to construct a survey to be distributed to CPSS 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 the importance of each task. These measures were then used to update the DCO of the CPSS examination.

New Detailed Content Outline (DCO) Date Effective: July 1, 2026.

- All exams administered before July 1, 2026, will follow the existing DCO.
- All exams administered on or after July 1, 2026, will follow the NEW DCO (Pages 2-14)
- It is possible to register for the CPSS examination and study from the old DCO but take the exam when the new DCO becomes active. Please be aware of this if you register for the exam in the Spring 2026.

Changes to the CPSS DCO (blueprint):

The CPSS DCO went through a series of revisions at the domain and task levels. Some of the revisions include moving tasks from the Communication and Education domain and including them in Domains 1-3. This allowed for a new domain, Data Management, to be created. New tasks were created to reflect the roles and responsibilities of a Sport Scientist regarding data privacy and protection, evaluating product, technology, and trends, and communication to stakeholders.

Comparisons between current and upcoming DCO are highlighted below.

Domain and Task Changes:

Domain 1 Training Theory and Process (Number of Tasks 3) is now Sports Science Theory and Process (Number of Tasks 6)

Domain 2 Needs Analysis (Number of Tasks 7) is now Interdisciplinary Needs Analysis (Number of Tasks 5)

Domain 3 Monitoring (Number of Tasks 5) is now Assessment and Monitoring (Number of Tasks 7)

Domain 4 Communication and Education (Number of Tasks 4) is now Data Management (Number of Tasks 6)

CPSS® EXAMINATION
Detailed Content Outline

	Total # of Questions
1. SPORT SCIENCE THEORY AND PROCESS	**24**
A. Understand and apply principles to enhance sport performance and reduce injury risk.	
B. Evaluate sport performance programs using the scientific process for data-informed decision-making.	
C. Apply knowledge of athlete preparation and performance (e.g., psychology, physiology, sport skill development, nutrition, recovery, training models) to support short- and long-term athletic development.	
D. Critically review sports performance products, technologies, and trends.	
E. Evaluate research studies to determine their relevance and applicability to practice.	
F. Communicate research findings to inform stakeholders and support evidence-based practice.	
2. INTERDISCIPLINARY NEEDS ANALYSIS	**25**
A. Research and identify sport performance demands and constraints through qualitative and quantitative methods.	
B. Collaborate with stakeholders to establish key performance indicators (KPIs).	
C. Develop profiling benchmarks and milestones for success.	
D. Identify resources and strategies to support short- and long-term performance goals.	
E. Communicate the results of the needs analysis to relevant stakeholders.	
3. ASSESSMENT AND MONITORING	**29**
A. Identify and address ethical and privacy considerations in data collection (e.g., ownership, permissions).	
B. Communicate the purpose and application of assessment and monitoring systems (e.g., movement tracking systems, load monitoring, biomarkers) to improve understanding among stakeholders.	
C. Evaluate assessment environments, equipment, and procedures for adherence to safety standards.	
D. Assess the validity, reliability, and feasibility of assessment and monitoring tools and select appropriate key performance indicators.	
E. Apply quality assurance techniques in data collection.	
F. Contribute to the development of, document, and follow data collection protocols.	
G. Systematically reevaluate the efficacy of assessments, protocols, applications, and interventions.	
4. DATA MANAGEMENT	**22**
A. Ensure data privacy and security protocols are followed to protect individual and organizational information.	
B. Design and manage a plan for data collection, storage, analysis, and application.	
C. Evaluate data quality (e.g., signal integrity, outliers) and apply data cleaning procedures.	
D. Analyze, model, and interpret data to support performance-related decision-making.	
E. Deliver timely, creative, and efficient feedback to stakeholders.	
F. Communicate the limitations of interpretations and conclusions to ensure responsible application.	
Totals	**100**

CPSS CASE STUDY AND SAMPLE QUESTIONS

Sport Information

Sport: Track: 400m

Level: Collegiate Division 1, Conference Championship Contributing Level Athlete – Not National / Olympic Level

Position: A 100-400m sprinter who is also used on relays. High volume contributor to the team.

Season: Last week of off-season training (August) before pre-season training begins in the fall semester (Sept – Dec)

Athlete Information

Age: 22

Gender: Female

Other Information: Height = 5'7"

Condition: Athlete is cleared to train but has been at home working remotely with athletic trainer or strength and conditioning coach

Task Information

Injury History: The athlete has a history of patellar tendinopathy (jumper's knee) and shin splints. The athlete previously dealt with these injuries during conference championships last season (May) and after school ended went home to rest and train on her own during the summer/off-season.

Current Situation: The athlete states she is "not feeling explosive during lifts", "has no kick during running workouts", and her "shins have been killing her since the 4th of July".

Current Reports from other Professionals: The strength and conditioning coach notes that they have observed a decrease in the athlete's reported lifting intensity and her written feedback, via the team's online strength and conditioning software program, is noticeably shorter and generic. Performance data is presented from the athlete's eight (8) previous workouts, conducted over the last three weeks. All testing was done in the beginning of the day's training session.

Table 1. Performance Data from the Last 8 Workouts, Over the Past 3 Weeks

		Workout							
Evaluation	Personal Best	1	2	3	4	5	6	7	8
Body Weight		144 lb (65.3 kg)	146 lb (66.2kg)	145 lb (65.8 kg)	148 lb (67.1 kg)	144 lb (65.3 kg)	151 lb (68.5 kg)	147 lb (66.7 kg)	146 lb (66.2 kg)
Total Training Volume Change Compared to Previous Workout			+5%	+5%	+5%	-12%	-8%	-5%	-5%
Vertical Jump	19.25 in (48.9 cm)	18.75 in (47.63 cm)		18.25 in (46.36 cm)		17.5 in (44.45 cm)		17.4 in (44.2 cm)	
Squat (3RM)	245 lb (111 kg)	215 lb (97.5 kg)		210 lb (95 kg)		215 lb (97.5 kg)		210 lb (95 kg)	
Clean (1RM)	185 lb (84 kg)		175 lb (79 kg)		175 lb (79 kg)		180 lb (81.6 kg)		175 lb (79 kg)
3x200-meter with 3:1 Rest - Goal Time 26.0 Seconds Per Run	25.6 / 25.4 / 25.9	25.7 / 26.1 / 26.0			26.3 / 26.5 / 26.8				27.9 / 27.8 / 28.1
Rate of Perceived Exertion (RPE) for the Entire Training Day (1 rest, 10 maximal)	NA	7	8	9	10	10	10	10	10

** RM = Repetition maximum, Blank = Did not complete that session*

1. What phase is the most likely contributor to the decrease in vertical jump height over the last eight workouts?
    A. transitioning from initial alarm stage to resistance
    B. transitioning from resistance to exhaustion
    C. competitive supercompensation
2. What is the most likely contributor to the decrease in sprint performance over the last eight workouts?
    A. overtraining
    B. undertraining
    C. injury
3. Based on the results from the table, which of the following performance indicators gives the sport scientist the most information to determine how to adjust the training load of the athlete?
    A. squat
    B. clean
    C. sprint time
4. What training focus should the sport scientist recommend on the track to improve sprint performance?
    A. sport psychology sessions and a maximum speed and power development program for 4-6 weeks
    B. acceleration and hypertrophy development for 4 weeks followed by maximal speed and strength development for 6 weeks
    C. Proper rehabilitation from injury coupled with sport psychology sessions and a return to play protocol for 6 weeks
5. Which of the following is the greatest risk of the shin splints injury recurring?
    A. increase the hamstring to quad ratio strength
    B. increase volume of high-intensity plyometrics
    C. improvement of landing and push-off mechanics in plyometric training
6. Which of the following performance data give the sport scientist the most information to determine how to adjust the training load of the athlete to elicit the best adaptive response to avoid overtraining?
    A. body weight, intensity, frequency
    B. frequency, volume, intensity
    C. body weight, volume, frequency

Answers: (1) B (2) A (3) C (4) C (5) B (6) B