



**ACCREDITED SPORTS
SCIENTIST AND ACCREDITED
HIGH PERFORMANCE MANAGER
PROFESSIONAL STANDARDS**

MAY 2019



Founded in 1991, Exercise & Sports Science Australia (ESSA) is the peak professional body and accrediting authority for over 7,000 university qualified and Accredited Exercise Physiologists, Exercise Scientists, Sports Scientists, and High Performance Managers.

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Preface

The ESSA Accredited Sports Scientist (ASpS) and Accredited High Performance Manager (AHPM) Professional Standards set out the *minimum* standards requirements for a professional to be accredited as a Sports Scientist and/or a High Performance Manager. The Standards describe the 1) knowledge, skills and competencies and 2) attributes that ESSA and the Sports Science industry recognise as necessary for delivery of safe and effective sports performance services, and to protect the well-being of athletes and other sports-related service users. These standards replace and expand on the ASpS and AHPM Professional Standards from December 2015.

ESSA acknowledges ASpS at two levels: Level 1 and Level 2.

Acknowledgement as an ASpS starts at Level 1. The Level 1 ASpS Professional Standards are based on the *minimum* requirements to practise lawfully, safely and effectively as a Sports Scientist.

The Level 2 ASpS Professional Standards expand on the Level 1 ASpS Professional Standards. At Level 2, ASpS have advanced knowledge, skills and expertise in Sports Science that are applied within the subdisciplines of Sports Science, including Performance Analysis, Skills Acquisition, Sports Biomechanics, Sports Physiology, and Strength Science.

AHPMs have advanced knowledge, skills and experience in their area of Sports Science expertise with appropriate leadership/management experience.

Members of the ESSA Sports Science Accreditation Advisory Committee

The revision of the ESSA Sports Scientist and Accredited High Performance Manager Professional Standards was led by the ESSA Sports Science Accreditation Advisory Committee.

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Important Terminology and Concepts

Service user

The term *service user* describes a person who, or group that, uses the professional advice or services of an Accredited Sports Scientist or Accredited High Performance Manager.

Service users may include any athletes or staff on the participation – performance pathway, including grass roots, talent development and elite.

They are in a competitive sporting structure and may include:

- individual athletes (able-bodied athletes and para-athletes)*
- teams
- youth to masters athletes
- coaches
- High Performance Managers
- Sports Scientists

**Where possible, the Sports Scientist should demonstrate exposure to providing services to a range of users across age, gender, capability and competition levels.*

Practice

The term *practice* describes work undertaken by the Sports Scientist or High Performance Manager for the purpose of demonstrating competence against the required standard. Whether remunerated or not, in practice the individual uses their skills and knowledge as a Sports Scientist or High Performance Manager within the ESSA-defined Scope of Practice for Sports Scientists and High Performance Managers. For the purpose of accreditation, practice activities are restricted to direct servicing, coach and athlete education, research and program management.

Cultural diversity

Given the *cultural diversity* in the Australian community, ASpSs and AHPMs need an awareness of cultural diversity to enable them to shape and deliver their services in a culturally aware and sensitive manner.

Considerations include:

- beliefs about and attitudes towards health care
- attitudes towards pushing the boundaries of performance
- ensuring a safe, non-judgemental environment that is sensitive to people's individual gender identities and sexual preferences and service users' choice of Sports Scientist of a particular gender or sex
- awareness of relevant Child Protection Legislation when working with persons 17 years old or younger
- nutritional considerations
- differences surrounding modesty and exposing skin

- cultural and/or religious practices and customs that may affect performance or assessment results (religious holiday observance e.g. Ramadan, Easter, Christmas, Hanukkah)

Setting

Sports Science services can be provided in a variety of settings:

- institutes or academies of sports
- professional clubs
- national sports organisations
- state teams
- local teams
- private businesses
- schools
- sports medicine clinics

Acronyms

AHPM- Accredited High Performance Manager

ASpS- Accredited Sports Scientist

ESSA- Exercise & Sports Science Australia

FTE- Full Time Equivalent

R&D- Research and Development

SSSM- Sports Science Sports Medicine

Attributes of an Accredited Sports Scientist

An ESSA Accredited Sports Scientist specialises in applying scientific principles and techniques to assist coaches and athletes to improve their performance, either at an individual level or within the context of a team environment. They may also apply their knowledge and skills to relevant projects within the sports industry. At all times, an ASpS makes the well-being of the athlete, the team and other service users their primary concern by providing diligent duty of care and not recommending the use of any substance or practice that might potentially cause harm to the service user.

The ESSA Accredited Sports Scientist (Level 1 and Level 2) is expected to possess the following attributes:

1. Ability to contribute to the development of an athlete.
2. Knowing, abiding by and upholding ethical practice and values of sporting excellence, fairness and athlete safety and well-being.
3. Understand, design or modify, and apply, assessment protocols and methods appropriate to the athlete or team and the situation.
4. Ability to design, deliver and interpret safe, effective and evidence-based Sports Science interventions for service users in a collaborative manner with medical, allied health and coaching staff.
5. Able to monitor, recognise, interpret, report and take appropriate action regarding adverse signs and symptoms that may arise during exercise, sport or recovery.
6. Ability to analyse and interpret quantitative and qualitative data.
7. Awareness of cultural competence, that is, the ability to practise sensitively and to communicate effectively with a diverse range of stakeholders in diverse social and cultural settings.
8. Ability to communicate appropriate information effectively with coaches, athletes and other health and medical professionals and the ability to document decisions appropriately and maintain confidential records.
9. Understanding of, and capacity to practise in accordance with, ethically relevant policies, legislation and regulations, including those concerning anti-doping, member protection, match fixing, privacy, equal opportunity, antidiscrimination, and workplace health and safety.
10. Understanding of and capacity to practise in accordance with sport-specific policies related to the practice of Sports Science including policies concerning child protection, supplementation, medications, and injections.
11. Capability to self-develop in the disciplines of Sports Science through educational engagement, ongoing learning and self-evaluation of practice, and through interprofessional working relationships and peer review.
12. Capacity to accept responsibility for fitness to practise as a Sports Scientist.

The ESSA Sports Science Professional Standards have been developed from these attributes and form a vital part of the accreditation requirements.

Attributes of an Accredited High Performance Manager

An ESSA Accredited High Performance Manager specialises in applying leadership and management skills, scientific principles and techniques to assist coaches, sports professionals and athletes within the context of a Sports Science Sports Medicine (SSSM) environment. They may also apply their knowledge and skills to relevant projects within the sports industry. At all times, an Accredited High Performance Manager makes the well-being of the athlete, the team and other service users their primary concern by providing diligent duty of care and not recommending the use of any substance or practice that might potentially cause harm to the service user.

The ESSA Accredited High Performance Manager is expected to possess the following attributes:

1. Able to apply leadership/managerial skills to a multidisciplinary team of SSSM professionals.
2. Knowledge of relevant legislation and compliance for the safety and well-being of individuals in high-performance multidisciplinary environments. Understanding of and capacity to practise in accordance with sport-specific policies related to the practice of Sports Science including policies concerning child protection.
3. Knowledge of, and capacity to uphold ethical practice and the values of sporting excellence, fairness and athlete safety and well-being including ensuring SSSM staff understand and are updated on anti-doping, supplementation, medication, injection, and match fixing rules.
4. Capacity to understand, as well as to select, design or modify, and then apply, assessment protocols and methods appropriate to the athlete, team or situation.
5. Capacity to evaluate the effectiveness of implementing evidence-based programs for SSSM in high performance programs in achieving projected performance outcomes.
6. Able to develop SSSM policies, procedures and strategic plans.
7. Cultural competence, that is, the ability to practise sensitively and to communicate effectively with a diverse range of stakeholders in diverse social and cultural settings.
8. Ability to communicate effectively in written and verbal form with coaches and athletes and with other health and medical professionals, and the ability to document decisions appropriately and maintain confidential records.
9. Able to manage relationships with key partners, which may include National Sporting Organisations (NSOs), National Institute Network (NIN), government, owners, and sponsors.
10. Ability to oversee and support the recruitment, development and retention of SSSM staff.
11. Able to apply managerial skills – e.g. input into preparation of budgets, financial control and forecasting/management of resource allocation and workforce structure within established financial parameters.

Sports Science Sports Medicine (SSSM) definition: A group of disciplines that work with sport. These may include, but are not limited to: Biomechanics, Performance Analysis, Medicine, Nutrition, Physiology, Physiotherapy, Psychology, Skill Acquisition, Soft Tissue Therapy, and Strength Science.

PROFESSIONAL STANDARDS FOR LEVEL 1 ACCREDITED SPORTS SCIENTIST



Professional Standard 1 - Professional Practice

Guiding Principle

An Accredited Sports Scientist can demonstrate an understanding of the framework of Sports Science practice. This includes evidence-based practice, ethical considerations, legislated requirements, codes of professional conduct, the service delivery setting, and professional obligations. An Accredited Sports Scientist can demonstrate ethical, professional behaviour and teamwork in delivering high-quality Sports Science services.

Each of the following Professional Practice standards must be addressed:

Elements of Professional Practice

An Accredited Sports Scientist:

- 1.1. Demonstrates an understanding of the ethical boundaries of the Sports Science profession.
- 1.2. Exhibits duty of care towards, and prioritisation of the interests of, service users (see Element 3.1) in the delivery of Sports Science services.
- 1.3. Demonstrates the use of testing procedures, calibration procedures and basic equipment maintenance in sports settings.
- 1.4. Demonstrates and understands the use of legislated health and safety requirements in both laboratory and field settings.
- 1.5. Practises Sports Science in a multidisciplinary service environment that includes other professionals, support staff, service users and, when relevant, their relatives and carers.
- 1.6. Applies appropriate communication techniques in interactions with service users, colleagues and other health professionals.
- 1.7. Practises as a Sports Scientist in a culturally sensitive, inclusive and non-discriminatory manner.
- 1.8. Proposes information to support service users to make informed decisions.

Professional Standard 2 - Planning and Decision Making

Guiding Principle

An Accredited Sports Scientist can demonstrate the application of planning and decision making that considers the needs of service users within diverse and relevant sporting environments. This includes planning, assessing, monitoring and appropriately documenting decisions in a multidisciplinary environment that includes collaboration with the Sports Science and medical team, coaching staff and service users.

Each of the following Planning and Decision Making standards must be addressed:

Elements of Planning and Decision Making

An Accredited Sports Scientist:

- 2.1 Employs principles for safe and effective practice to improve service user performance and/or reduce injury risk in a sports setting.
- 2.2 Analyses the demands of the sport and the capabilities of the athlete.
- 2.3 Evaluates the safety, efficacy and appropriateness of new technology and Sports Science testing protocols prior to the induction into practice.
- 2.4 Provides feedback or recommendations to improve performance for service users within multidisciplinary sports settings, which improves the effectiveness of the coach and athlete in training and competition.

Professional Standard 3 - Implementation of Sports Science Services

Guiding Principle

An Accredited Sports Scientist can demonstrate delivery of safe and appropriate Sports Science services. Services include those that are delivered collaboratively with other professions, that meet the service users' needs, and that are based on scientific evidence and methodologies.

Each of the following Implementation of Sports Science Services standards must be addressed:

Elements of Implementation of Sports Science Services

An Accredited Sports Scientist:

- 3.1 Evaluates critically the efficacy of implemented interventions.
- 3.2 Employs logical and systematic problem-solving techniques.
- 3.3 Translates applicable investigation and research information to stakeholders.
- 3.4 Delivers or recommends evidence-based interventions to achieve the performance goals of service users in sports settings.

Professional Standard 4 - Understanding and Implementation of Research

Guiding Principle

An Accredited Sports Scientist can collect data, interpret data, formulate desirable outcomes, and translate and apply research outcomes into sports settings.

Each of the following Understanding and Implementation of Research standards must be addressed:

Elements of Understanding and Implementation of Research

An Accredited Sports Scientist:

- 4.1 Selects appropriate evidence relevant to Sports Science practice from a range of sources.
- 4.2 Applies a range of valid and reliable methods, tools and techniques relevant to Sports Science practice.
- 4.3 Assesses collected data critically to determine its validity and reliability.
- 4.4 Translates research outcomes into evidence-based practice.

Professional Standard 5 - Data Handling and Management

Guiding Principle

An Accredited Sports Scientist can apply appropriate data handling and privacy considerations to the collection, interpretation, reporting, storage, and communication of data and research outcomes in sports settings.

Each of the following Data Handling and Management standards must be addressed:

Standards of Data Handling and Management

An Accredited Sports Scientist:

- 5.1 Assesses data critically to identify meaningful effects.
- 5.2 Uses data to evaluate and develop programs for service users.
- 5.3 Translates the outcomes of data analysis into meaningful information for service users and other relevant stakeholders.
- 5.4 Applies confidentiality and privacy legislation to information of service users.

PROFESSIONAL STANDARDS FOR LEVEL 2 ACCREDITED SPORTS SCIENTIST



Guiding Principle

A Level 2 Accredited Sports Scientist demonstrates specialised knowledge and skills in Sports Science that are applied in the subdisciplines of Sports Science, including Performance Analysis, Skill Acquisition, Sports Biomechanics, Sports Physiology, and Strength Science.

Each of the following Professional Practice standards must be addressed:

Standards of Professional Practice

A Level 2 Accredited Sports Scientist:

1. Demonstrates advanced knowledge and training in chosen Sports Science domain.
2. Applies the principles of leadership to guide advancements in sports and sports programs.
3. Demonstrates the ability to support and mentor SSSM colleagues, program staff, new graduates, and emerging Sports Scientists.
4. Critically appraises, evaluates, and advises on new and emerging evidence, technologies and techniques to recommend/design evidence-based protocols to effect changes in performance.
5. Evaluates internal and external factors that influence performance in sports settings.
6. Demonstrates collaboration with SSSM colleagues and program staff to improve the effectiveness of the athlete, coach and team in training and competition.
7. Appraises training programs and interventions including implementing monitoring systems that assess positive/negative adaptations and performance outcomes.
8. Engages with research and development (R&D) and/or innovation projects.
9. Demonstrates the ability to work with others with wide ranging views to constructively solve complex problems.

PROFESSIONAL STANDARDS FOR ACCREDITED HIGH PERFORMANCE MANAGER



Guiding Principle

An Accredited High Performance Manager can demonstrate specialised knowledge and skills in management to lead SSSM programs for high performance, elite and professional sports and athletes. Each of the following Professional Practice standards must be addressed:

Standards of Professional Practice

An Accredited High Performance Manager:

1. Leads and manages the SSSM program of a sporting team, organisation or club.
2. Implements effective leadership principles and practises for managing a high performance multidisciplinary team.
3. Employs procedures to ensure collaboration and communication between coach(s) and the SSSM team.
4. Accepts responsibility for the design, implementation and management of SSSM programs for elite, high performance athletes and teams (e.g. junior elite through to senior elite; Olympic/Paralympic; professional).
5. Critically evaluates new and emerging tools, techniques and performance solutions (coaching, science, medicine and technology) aimed at improving athletic and sports performance or rehabilitation services.
6. Evaluates the effectiveness and implementation of evidence-based programs in SSSM to achieve projected performance outcomes.
7. Implements and manages SSSM policies and procedures including professional codes of conduct and other relevant health and safety policies ensuring athlete and SSSM staff welfare is at the forefront of training and competition.
8. Manages relationships with key partners, which may include National Sporting Organisations (NSOs), National Institute Network (NIN), government, owners, and sponsors.
9. Takes part in the recruitment, development and retention of SSSM staff.
10. Takes part in preparation of budgets, resource allocation and workforce structure.
11. Takes part in the development and implementation of a strategic plan to support projected performance outcomes over an extended period (e.g. 3-5 years).
12. Demonstrates an understanding of various performance solutions (including, but not limited to: coaching, science, medicine and technology) relevant to the SSSM team.

Acknowledgements

ESSA's Accredited Sports Scientist and Accredited High Performance Manager Professional Standards have been developed in consideration of other international accreditation standards. ESSA would like to acknowledge the use of standards developed by the British Association of Sport and Exercise Science (BASES), Sport and Exercise Science New Zealand (SESNZ), and the Australian Physiotherapy Council.

Glossary

<i>Ability</i>	The power or capacity to do something; competence in any occupation
<i>Advanced</i>	Means demonstrated evidence of increased skills, reasoning, knowledge and experience leading to expert status in one or more areas of exercise and sports science practice
<i>Analyse</i>	Examine something methodically and in detail, typically in order to explain and interpret it
<i>Apply</i>	Put to use for some practical purpose
<i>Appraise</i>	Assess the performance of something formally; assess the value or quality of something
<i>Assess</i>	Evaluate or estimate the nature, ability or quality of something
<i>Assessor</i>	A person who meets the ESSA Assessor and Supervisor requirements, making them suitable to judge that applicants meet the requirements and standards for ESSA Accredited Sports Scientist
<i>Assume responsibility</i>	A duty or obligation taken upon oneself
<i>Athlete</i>	A person who trains for and competes in sporting events, either as a professional or recreationally
<i>Capacity</i>	The amount that something can produce
<i>Carer</i>	A family member or paid helper who regularly looks after a child or a sick, elderly, or disabled person
<i>Demonstrate</i>	Clearly show the existence or truth of something by giving proof or evidence; give a practical exhibition and explanation of how a machine, skill or technique works or is performed
<i>Design</i>	A plan produced to show the look and function or workings of a thing before it is made
<i>Effect</i>	Cause something to happen; bring about; be in operation, as a law
<i>Elite</i>	A select group that is superior in terms of particular abilities or qualities to the rest of a group or society
<i>Employ</i>	Make use of
<i>Enable</i>	Make it possible for someone to do something

<i>Engage</i>	Occupy or attract someone's interest or attention; facilitate participation or involvement in
<i>Ethical</i>	Being in accordance with the rules or standards for right conduct or practice of a profession
<i>Evaluate</i>	Form an idea of the amount, number of, value of; assess
<i>Exhibit</i>	Manifest clearly a quality or a type of behaviour
<i>Fitness to practise</i>	A practitioner has the skills, knowledge and character to practise in their profession safely. It is not simply about professional performance, but also includes acts carried out by the practitioner that may affect public protection or confidence in the profession
<i>Formulate</i>	Create or prepare methodically
<i>High performance athlete</i>	An athlete whose training regimen is comparable to that of other athletes around the world who compete at the highest level
<i>Intervention</i>	The act of intervening, interfering or interceding with the intent of modifying the outcome. In sport, an intervention is usually undertaken to help improve performance
<i>Judge</i>	Form an opinion or conclusion about something or someone
<i>Manage</i>	Be in charge of; run
<i>New technologies</i>	Any set of productive techniques which offers a significant improvement (whether measured in terms of increased output or savings in costs) over the established technology for a given process in a specific historical context. What constitutes 'new' is subject to continual redefinition as successive changes in technology occur
<i>Organisation</i>	A collection of persons, clubs or associations registered as an incorporated association or company limited by guarantee
<i>Plan</i>	Design something to be made or done; decide on and make arrangements for in advance
<i>Practise</i>	Perform an activity or exercise a skill repeatedly or regularly in order to acquire, improve or maintain proficiency in it (<i>Verb</i>)
<i>Practice</i>	Means, in which the individual uses their skills and knowledge as a practitioner in their profession (<i>Noun</i>)
<i>Professional sports</i>	Sport in which athletes receive payment for their performance

<i>Relative</i>	A person who is connected with another or others by blood or marriage
<i>Select</i>	Carefully chose (from a larger number) something as being the best or most valuable
<i>Service user</i>	A person who, or group that, uses the professional advice or services of a Sports Scientist
<i>Sports Science domain</i>	Domains broadly consist; Performance Analysis, Skills Acquisition, Sports Biomechanics, Sports Physiology, and Strength Science
<i>Sports Science service</i>	Activities that fall within the scope of practice of a Sports Scientist
<i>Sports Science Sports Medicine</i>	A group of disciplines that work with sport. These may include, but are not limited to: Biomechanics, Performance Analysis, Medicine, Nutrition, Physiology, Physiotherapy, Psychology, Skill Acquisition, Soft Tissue Therapy, and Strength Science
<i>Subdiscipline of Sports Science</i>	An area of practice within Sports Science. Recognised subdisciplines include Sports Physiology, Sports Biomechanics, Skill Acquisition, Strength Science, and Performance Analysis
<i>Supervisor</i>	A person who meets the ESSA Assessor and Supervisor requirements, making them suitable to oversee professional experience in Sports Science
<i>Translate</i>	To explain in terms that can be more easily understood; to convert
<i>Understand</i>	Perceive the intended meaning of words, a language, or a speaker; interpret or view something in a particular way
<i>Use</i>	Take, hold, or deploy something as a means of accomplishing or achieving something
<i>Valid</i>	Data or reasoning having a sound basis in logic or fact



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