



SETTING THE STANDARDS
FOR THE EUROPEAN
HEALTH AND FITNESS SECTOR

EuropeActive Standards EQF Level 4 Personal Trainer



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I. Executive Summary

This document represents the results of the 2018 review of the EuropeActive Level 4 Personal Trainer educational Standards. The original Standards were completed in 2005 and previously reviewed and updated in 2011. These standards present the requirements for exercise professionals working as Personal Trainers in the European health and fitness industry and are based on the European Qualification Framework (EQF) level 4.

These updated Standards and the education associated with them are purpose and outcome driven and are aligned with the industry goal to get: **'More People, More Active, More Often'**.

Information is organised in the following 3 chapters:

- Chapter II: Technical Expert Group members and External Consultation Experts. it is to be noted that more than thirty technical experts across Europe representing the different stakeholders of our sector volunteered to assist with the review and expansion of the **EuropeActive** Standards.
- Chapter III: the essential skills and knowledge written as learning outcomes, based on job purposes, required to work as a Personal Trainer in the European health and fitness industry at the EQF-Fitness Level 4, where EQF 3 Instructor knowledge is a pre-requisite.
- Chapter IV: the **EuropeActive** Competence Framework and the essential competences, associated to skills and knowledge written as learning outcomes, based on occupational purposes, required to work as a Personal Trainer in the European health and fitness industry at EQF-Fitness level 4.

These standards were fully adopted within the process of external consultation and afterwards approved by the Professional Standards Committee.

II. Technical Expert Group Members and External Consultation Experts

Technical Expert Group (2011):

- Prof. Alfonso Jiménez (EHFA, Spain) - TEG Leader (and Chairman of EHFA Standards Council 2011)
- Ben Gittus (SkillsActive, UK)
- Margarida Manz (Manz Produções, Portugal)
- Matthias Guett (EOSE, Lyon, France)
- Maura O'Sullivan Ryan (NCEF, University of Limerick, Ireland)
- Niki Keene (Curves International)
- Pernilla Ohlsson (PT School, Sweden)
- Richard Earney (Aspria, Belgium).
- Susanne Björklund (SAFE, SATS, Sweden)
- Xavier Martins (Les Mills International)
- Jean Sadouni, Chair of TEG Leaders
- Cliff Collins, EREPS Director (Observer)
- Irene Van Geest, Vice-Chair EHFA SC (external reviewer)

Technical Expert Group (2017):

- Alexis Batrakoulis, MSc, GRAFTS, EuropeActive (Greece)
- Alfonso Jiménez, PhD, Coventry University / Go Fit (UK / Spain)
- Bartosz Groffik, PZTP (Poland)
- Francesco Bertiato, Technogym (Italy)
- Julian Berriman, MA, EuropeActive (UK)
- Lou Atkinson, PhD, Aston University (UK)
- Manuel Valcarce, BSc, VALGO (Spain)
- Marta Fernandes, BSc, Go Fit (Portugal)
- Rita Santos Rocha, PhD, ESDRM Sport Sciences School of Rio Maior-IPSantarém, EuropeActive (Portugal) – TEG leader
- Sasha Linz, BSc, Fitness First (Germany)
- Simona Pajaujiene, PhD, Active Training / Lithuanian Sports University / EuropeActive (Lithuania) – TEG leader
- Stefan Westerback, FISAF (Finland)

External Consultation Group (2018):

- Anna Szumilewicz, PhD, Gdansk University of Physical Education and Sport (Poland)
- Ben Jackson, Active IQ (United Kingdom)
- Ben Pratt, Keilir Academy (Iceland)
- Christoffer Andersen, PhD, MSc, Metropolitan University College (Denmark)
- Graham Melstrand, American Council on Exercise (USA)
- Maria Pedersen, At Work A/S (Denmark)
- Mikael Witick, Trainer4You (Finland)



- Per Bergqvist, Bergqvist Massage & Friskvårdsutbildningar (Sweden)
- Susana Franco, PhD, ESDRM Sport Sciences School of Rio Maior-IPSantarém (Portugal)
- Vera Simões, PhD, ESDRM Sport Sciences School of Rio Maior-IPSantarém (Portugal)

Julian Berriman MA
Director
EuropeActive's Professional Standards Committee
Brussels, June 2018

III. EuropeActive Skills and Underpinning Knowledge for Personal Trainers (EQF Level 4) as part of the EuropeActive Learning Outcomes Framework

Specific Prerequisites

This chapter supports the EuropeActive Competence Framework and contains the essential skills and knowledge written as learning outcomes, based on job purposes, required to work as a Personal Trainer in the European Health and Fitness Sector at the EQF Level 4, where EQF 3 Fitness Instructor knowledge is a pre-requisite¹.

All exercise professionals will require both basic core knowledge and specific knowledge related to the context in which they work and there are specific pre-requisites before starting the EQF 4 qualification:

- Over 18 years of age and a high school diploma or equivalent.
- It is assumed that the EQF Level 4 Personal Trainer will have acquired all knowledge required to work as a Basic Instructor as identified in the EuropeActive EQF Level 3 Fitness Instructor standards.

Personal Trainers are **not** endorsed to:

- Prescribe rehabilitation programmes² (i.e., a Personal Trainer is not a Physical Therapist);
- Provide exercise testing and prescription for at-risk populations (i.e., a Personal Trainer is not an Exercise Physiologist / Clinical Exercise Physiologist);
- Prescribe any kind of medication or supplements (i.e., a Personal Trainer is not a General Practitioner);
- Prescribe nutritional programmes³ (i.e., a Personal Trainer is not a Dietitian/Nutritionist);
- Diagnose any psychological disorders or mental health conditions (i.e., a Personal Trainer is not a Psychologist);
- Provide psychological counselling (i.e., a Personal Trainer is not a Psychologist);
- Diagnose diseases, disabilities or other clinical conditions (i.e., a Personal Trainer is not a General Practitioner).

¹ Some students enroll in the EQF 4 courses without working through this progression, i.e., without attending an EQF 3 course. Thus, the training provider should ensure that these contents are included within their courses.

² However, a PT may be able to instruct a client in mobility, stretching and corrective strengthening exercises that can still be part of a ‘rehabilitation’ programme, albeit the latter stages of rehabilitation.

³ Giving specific, individualised dietary recommendations for health problems and giving specific nutrient intake recommendations are outside their scope of practice.

Introductory Information

What does level 4 means at EQF?

Level of the EQF	Knowledge is described as theoretical and/or factual.	Skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).	Competence is described in terms of responsibility and autonomy.
The learning outcomes relevant to Level 4 are	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable but are subject to change. Supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities.

What does level 4 mean at Fitness QF?

EQF Level	Occupation	EuropeActive Standards	Target Audience
Level 4	Personal Trainer	EuropeActive Level 4	Apparently healthy adult population

Occupational Title

Personal Trainer.

Job Purpose

Coach clients individually according to their fitness needs, through an agreed exercise/physical activity plan and assist with behavioural change.

Occupational Description

A personal trainer's role includes designing, implementing and evaluating exercise/physical activity programmes for apparently healthy and low risk adult populations by collecting and

analysing client information to ensure the effectiveness and safety of personal exercise programmes. A personal trainer should also actively encourage potential clients/members to participate in and adhere to regular exercise/physical activity programmes, employing appropriate motivational strategies to achieve this.

Occupational Roles

The personal trainer should be able to:

1. Collect information relating to individual clients
2. Select and conduct fitness assessments to establish client fitness and skill level, cooperating with or referring to, an exercise for health specialist, an exercise physiologist⁴, an advanced referral practitioner, or an allied health professional, as necessary, as required by the scope of practice of PTs
3. Analyse information relating to individual clients, making an assessment of client's skills and abilities and identifying specific threats and possibilities to start the training process, and if necessary, refer the client to a more appropriate professional
4. Identify, agree and review short, medium and long-term goals to ensure the effectiveness of exercise programmes, referring to an exercise for health specialist, an exercise physiologist, or an allied health professional, as necessary, as required by the scope of practice of PTs
5. Design a range of exercise programmes in accordance with the needs of clients by applying principles of exercise programming
6. Conduct assessments of the exercise space, equipment and environment in order to identify potential hazards and undertake necessary modifications to provide safety and reduce risk for clients and the personal trainer
7. Provide clients with accurate and credible information on the principles of nutrition and weight management, referring to a dietitian/nutritionist, as necessary, as required by the scope of practice of PTs
8. Develop and apply strategies to motivate clients to engage in and adhere to an exercise programme
9. Evaluate how current technology can help clients to stay motivated to adhere to physical activity guidelines and structured exercise programmes
10. Deliver good customer service and be a positive role model at all times and keep up to date with industry developments
11. Promote healthy activities and related strategies for daily living to clients
12. Make the appropriate decisions relating to clients and their programmes/goals and, where required, refer the client to a more appropriate professional
13. Work within the parameters given at Level 4, recognising the standards and professional limitations that this provides and, referring to appropriate members of staff for guidance and support
14. Apply business, marketing, and selling strategies and best practices to achieve success as an employee, independent contractor or entrepreneur.

⁴ Exercise Physiologist or Clinical Exercise Physiologist.

Core Knowledge Areas and Skills Requirements

The educational standards for the Personal Trainer EQF Level 4 include the following core knowledge areas:

PERSONAL TRAINER – Level 4 Core Knowledge Areas

Role of the PT	Functional anatomy	Physiology	Nutrition
Psychosocial aspects of health & fitness	Health & fitness assessment: collecting and analysing information	Training adaptation & exercise planning & programming	Business and marketing skills for personal trainers

The core knowledge and skill requirements are divided into the following sections:

3.1 - Role of the PT

Section Overview

- Knowledge and understanding of the basic job roles of the exercise professional as a Personal Trainer, within the health, fitness and wellness industries.
- Knowledge and understanding of the principles that underpin personal training and how personal training differs from other types of physical activity/exercise instruction.

Section Headings

3.1.1 Professionalism, Code of Practice/Ethics/National Standards and Guidelines

Learners should demonstrate knowledge and understanding of:

- The ethical requirements that are intrinsic to the Personal Trainer role as stated in the EUROPEACTIVE and EREPS Code of Ethical Practice (for more information take level 3 or visit www.ereps.eu)
- Legal Guidelines and Professional Responsibilities (depending on each country's legislation)

- The scope of legal responsibility of the personal trainer⁵
- The legal, financial and organisational issues related to running a self-employed business related to active leisure or fitness services
- The labour law, legal provisions on the protection of personal data, tax law and copyright law regarding the implementation of the training process in active leisure

3.1.2 Presentation

Learners should demonstrate knowledge and understanding of:

- Basic procedures to introduce him/herself to new clients
- General rules for customer care
- The basic principles of customer care to include perceived benefits
- The methods and practices, which contribute to effective customer care
- The skills of effective customer care: *communication, body language, negotiation*

3.1.3 Health Promotion

Learners should demonstrate knowledge and understanding of:

- The concepts of physical activity, exercise and sport (among others) in order to clarify and educate clients on the best wellness approach in all the aspects of their lifestyle
- The cardiovascular fitness, muscular strength and endurance, and flexibility related benefits of physical activity and the significance of these benefits in reducing risk of disease
- The current guidelines for health promotion, physical activity and wellness
- The current guidelines for structured exercise and physical fitness
- The barriers and motivators to exercise and physical activity participation and lifestyle change
- The exercise continuum for different levels of physical activity to include relative benefits
- The agencies involved in promoting physical activity for health at national and international level
- How to promote a healthy lifestyle regarding: nutrition, sleep, other opportunities for physical activity in everyday life (e.g., active commuting), stress management and the avoidance of smoking, excess sitting, excess alcohol and drugs

3.1.4 Building a Plan and Deliver Personal Training

Learners should demonstrate knowledge and understanding of:

⁵ It should cover safety and risk management, intellectual property and trademarks, doping and supplements - among other topics of interest.

- The principles that underpin personal training and how personal training differs from other types of physical activity instruction
- The difference between planning supervised and unsupervised activities and how to build these into a timetable of sessions
- The types of environment within which personal training may be delivered and how to make best use of these
- Specific health and safety issues relating to delivering personal training in an environment not designed for physical activity instruction
- How to improvise effective activities with the client according to the resources available
- The importance of maintaining frequent contact with the client, including between sessions
- The proactive role of the Personal Trainer regarding the adaptation process for each individual especially at the beginning of the training programme
- The importance of providing a proper dose response relationship according to the level of the individual
- The importance of a regular and planned communication strategy regarding the training adaptation process
- The need to refer to other health professionals such as a general practitioner, psychologist, physiotherapist, neuromuscular therapists, consultant, etc.

3.1.5 Use Current Technology:

Use appropriate technological developments to help clients increase general activity levels and be motivated to adhere to exercise programmes - the learner should be able to:

- Identify the main developments in technology relevant to the health and fitness industry
- Describe how technological innovation such as heart rate monitors, wearables and mobile phone applications can engage and support clients in maintaining recommended physical activity levels
- Describe how health and fitness technology can assist in and improve health and fitness assessments
- Use data to support the effective delivery of exercise programming and client engagement with programmes
- Explain how technology can promote client motivation and the achievement of personal goals
- Explain how to collect, record, monitor, analyse and interpret client data provided by current technological options
- Describe how to maintain legal, ethical and professional standards when working with new technologies and privacy of client data
- Use new technologies to offer a better service and to increase adherence to physical activity
- Identify the limitations and potential negative outcomes of using technology (e.g., clients focusing too much on reaching goals, burned calories, food and fitness trackers or competing with others and not resting when injured, etc.)

Recommended learning hours for this content⁶: 25-35h

Recommended evaluations: written and practical.

3.2 - Functional Anatomy

3.2.1 Functional Kinesiology/Biomechanics

Learners should demonstrate knowledge and understanding of:

- The body's three anatomical axes and planes including the terms frontal (coronal), sagittal and transverse
- The classification of joints in the human body (fibrous, cartilaginous and synovial) focusing on their functional significance including examples of each type and sub-type of joint
- The importance of ensuring that movement at all joints is kept in the correct planes throughout exercise performance for the prevention of ligament strain and potential risk of injury (e.g., at shoulder joint, inappropriate biomechanics can place a strain on the rotator cuff muscles increasing risk of osteoligamentus injury)
- Stability and mobility within each type of joint
- Classification of bones – to include long, short, flat, irregular, sesamoid, relating structure to function
- Role of osteoblasts and osteoclasts, and mechanical and hormonal contribution to bone density
- Bone density and its relation to resistance training activities
- Long and short-term effects of exercise on bone to include osteoporosis
- Articulations and the joint movements possible. To include the following movement terms with examples: flexion, extension, hyper-extension, adduction, abduction, elevation, depression, protraction, retraction, lateral flexion, horizontal flexion and extension, plantarflexion, dorsiflexion, internal and external rotation, circumduction, pronation, supination, eversion and inversion
- The main bones and their implications for vital functions and movements
- The vertebral column: structure and function – role of spinal curves
- The importance of maintaining the correct degree of spinal curvature at the cervical, lumbar and thoracic vertebrae in relation to weight-bearing and biomechanical efficiency and for the effective transmission of stress, caused by impact, through the pelvic girdle, kinetic chain and muscular system
- Abnormal degrees of curvature in the spine (lordosis, kyphosis and scoliosis) and their importance to exercise safety and the design of appropriate activities
- The high risk of shoulder joint displacement and the increased scapular stabilising role of the surrounding synergistic musculature and ligaments
- The potential for sprains and ligamentous damage as a result of excessive non-functional movement during activities, such as running
- The main structural and physiological characteristics and functions of the osseous connective tissues to include the periosteum, ligaments (dense regular collagenous/elastic fibres), joint capsules (dense irregular, elastic, collagenous) and fasciae

⁶ Including face-to-face teaching, distance learning/online study, or blended study.

- The structure of ligaments and their tensile strength related to fibre direction and their sensitivity to shearing forces and tearing
- Biomechanical principles of movement - to include 1st, 2nd and 3rd class levers with examples (e.g., calf raises for 2nd class lever and flexion of the elbow for 3rd class lever)
- Biomechanical implications of different centres of gravity in relation to posture and patterns of adiposity
- Open and closed chain kinetic movements with examples of each and consideration of their advantages and disadvantages.

3.2.2 Muscles

Learners should demonstrate knowledge and understanding of:

- The three types of muscle in the human body (skeletal, smooth, cardiac)
- The gross anatomy and structure of skeletal muscle and its connective tissue
- The connective tissue of muscle merging into tendons composed of regular collagenous filaments
- Muscle shape and fibre arrangement including directional forces and line of pull (uni-pennate, bi-pennate, multi-pennate)
- The role of proprioceptors of tendons
- The interaction between the contractile filaments of muscle (actin and myosin)
- The role of a motor unit (i.e., the nerve and the muscle fibers which it innervates) in providing an 'action potential' to create fine or coarse muscle control
- The structural features and characteristics of Type 1 (slow twitch) and Type 2A (fast twitch/intermediate) and Type 2B fibres and the implications of exercise intensity on the recruitment sequence of different motor unit types
- The different types of muscular contractions (concentric, eccentric, isometric, isotonic and isokinetic)
- The effect of each type of muscular contraction on training adaptations and the way muscles can be influenced by different training modalities (e.g., body position in relation to gravity, aqua workouts and partner work)
- The likely relationship between delayed onset muscular soreness (D.O.M.S.) and eccentric, concentric and isometric muscle work
- The major muscles of the body defining their starting points in terms of the bones they originate from (though in most cases NOT the exact anatomical part of the bone), the joints that they cross and the bones that they insert onto (finishing point)
- The joint actions as a result of muscular action
- A range of actions and activities, the agonists, antagonists, main synergists and fixators
- The functional role of abdominal muscles in synergy with other muscles of the trunk, rib cage, pelvis and vertebral column
- The role of muscles like the gluteus group, latissimus dorsi and the thoracolumbar fasciae
- The importance of correct involvement of the hip flexor muscles (iliopsoas) in core stability training
- The role played by the hip flexor muscles and pelvic floor in core training
- Short and long-term effects of exercise on muscles.

Recommended learning hours for this content⁷: 25-35h

Recommended evaluations: written.

3.3 - Physiology

3.3.1 Energy Systems

Learners should demonstrate knowledge and understanding of:

- The three energy systems used for the production of adenosine triphosphate (ATP) in working muscle - the alactic anaerobic phosphocreatine (PC) system, the anaerobic lactate system and the aerobic system
- The effect of the type of exercise, intensity, duration, fitness levels and nutritional level on the three energy systems
- The way to use the three energy systems in correlation with the goal of the client
- The way to use acute variables during training to recruit the different energy systems
- The terms aerobic and anaerobic threshold
- Effects of interval training and EPOC (excess post-exercise oxygen consumption) on the metabolism
- The ability of the body to burn fat throughout a range of intensities (not just low intensity), e.g., if the aerobic threshold is raised you can utilise fat more effectively at higher intensities
- The relationship between METs (metabolic equivalent) and kilocalories and the prediction of calorie expenditure based on body weight, exercise MET level and duration with examples of different activities and their MET values
- The methods of monitoring exercise intensity, to include: the talk test, the rate of perceived exertion (RPE) scales (6 to 20 or 0 to 10), heart rate monitoring (age-related and heart rate reserve), and the benefits and limitations of each method
- The use and amounts of energy nutrients at different intensities.

3.3.2 Cardiorespiratory System

Learners should demonstrate knowledge and understanding of:

- The anatomy of the heart to include the names and location of the heart valves, the muscular component and the flow of blood through the heart
- The terms HR (heart rate), resting HR, HRmax, HR reference values for various populations, HR training zones
- The blood flow and blood pressure, reference values for various populations
- The cardiac cycle and the terms stroke volume⁸ and cardiac output⁹
- The structure, function and characteristics of arteries, arterioles, veins, venules and capillaries
- The short and long-term effects of physical activity on the cardiovascular system
- The effect of medications on the cardiovascular system and their impact on training

⁷ Including face-to-face teaching, distance learning/online study, or blended study.

⁸ Amount of blood pumped per beat

⁹ Amount of blood pumped per minute = stroke volume x beats per minute

- The respiratory system: description and function
- The terms ventilatory pump, pulmonary ventilation (VE), ventilatory rate, ventilatory threshold, maximal oxygen consumption (VO_{2max})
- The relationship between the cardiovascular system and respiratory system and how regular physical activity impacts on this¹⁰
- The passage of inhaled air from the atmosphere to the cellular level and back to the lungs and atmosphere
- Healthy lifestyle choices and their positive effect on cardiorespiratory tissues, e.g., the effects of smoking or alcohol avoidance
- Short and long term effects of exercise on the cardiorespiratory system
- Coronary Heart Disease (CHD) and associated risk factors such as smoking, high blood pressure, high blood cholesterol, physical inactivity, diabetes mellitus, family history, age, stress, obesity.

3.3.3 Nervous and Endocrine System

Learners should demonstrate knowledge and understanding of:

- The main functions of the nervous system
- The structure and roles of the Central (CNS) and Peripheral (PNS) Nervous Systems
- The main roles of the nervous system to include:
 - Sensory input – monitoring events in and outside the body
 - Interpretation – analysing data
 - Motor output – response to incoming data
- The two parts of the nervous system – the Central Nervous System (CNS) incorporating the brain and spinal cord and the Peripheral Nervous System (PNS) consisting of all nerves extending from the spinal cord, to include:
- The role of the CNS in receiving input from the sense organs and receptors about the state of both the external and internal environment, collating all of the information and sending out messages via the motor neurons of the PNS to effectors (muscles and glands)
- The PNS and its divisions into somatic and autonomic branches
- The role of somatic and autonomic branches of the PNS in regulating the voluntary contraction of the skeletal muscles and the activity of internal organs such as the smooth (involuntary) muscles, cardiac muscle, and glands of the skin and viscera
- The somatic branch terminating at the neuromuscular junction and controlling movement under voluntary control
- The role of the Autonomic Nervous System (ANS) in controlling cardiac and smooth muscle, the endocrine glands that secrete hormones and other organs, thereby regulating their activity
- The role of the sympathetic and parasympathetic pathways of the ANS

¹⁰ Short-term effects to include: increase in heart rate, increase in breathing rate, effects of build-up of CO₂ (carbon dioxide) in the bloodstream. Long term effects including increase in stroke volume, lower resting heart rate, reduced risk of heart disease, reduction of high blood pressure, improved blood cholesterol, reduction of body fat and increased every day function, etc.

- The two opposing branches (to include the neurotransmitters and receptors) and their roles, e.g., sympathetic nerves speed up responses (e.g., heart rate) and mobilise energy stores to get us ready for action; and parasympathetic nerves slow things down and are more active during periods of calm and relaxation
- The role of regular activity in enhancing hard wire neuromuscular connections and improving all of the features of motor fitness such as reaction times, balance, spatial awareness and coordination, etc.
- Hormonal responses to exercise and their catabolic and anabolic effects
- The link between exercise intensity and hormonal reactions for specific goals like weight loss, muscle building and wellness
- The role of cortisol and the side effects of excessive production.

Recommended learning hours for this content¹¹: 25-35h

Recommended evaluations: written.

3.4 - Nutrition

Learners should demonstrate knowledge and understanding of:

- The dietary role and common dietary sources for each of the six main nutrients (carbohydrate, fat, protein, vitamins, minerals, water)
- The balance between saturated and unsaturated fatty acid and its effects on health
- The importance of the right intake of essential fatty acids (Omega 3 and 6) and their effects on health
- The role of vitamins and minerals in cell metabolic process
- The role and desirable levels of total cholesterol, high density lipoproteins (HDL) and low density lipoproteins (LDL) in the body, including the total cholesterol/HDL ratio
- Examples of food items in each of the four basic food groups
- Examples of food items for vitamins and minerals intake
- The components of energy balance - basal metabolic rate, thermic effect of food and physical activity level
- Methods to estimate calorie requirement
- How to develop a healthy, balanced way of eating
- Healthy eating patterns
- How dietary intake influences health; how lack of micronutrients (vitamins and minerals) influences health
- Lifestyle advice, to include use of tobacco, alcohol, caffeine (current government guidelines)
- How some medical conditions (e.g., CHD, diabetes mellitus, obesity, osteoporosis) may be impacted by nutrition (general advice)
- Energy needs for different activities/sports/fitness plans
- The role of carbohydrate, fat and protein as fuels for aerobic and anaerobic exercise
- Safe and effective advice about eating patterns for weight (fat) loss/gain; energy balance; appropriate 'weight' loss goals
- Appropriate referral/advice organisations

¹¹ Including face-to-face teaching, distance learning/online study, or blended study.

- General knowledge of current weight-loss fads and popular diets
- Hydration and electrolyte consumption guidelines for physical activity
- General nutrition recommendations to support aerobic dominant, steady state exercise (60 min+)
- General nutritional recommendations to support higher intensity, lactate dominant, intermittent sports and activities (e.g. football, basketball, circuits, lactate intervals, cross fit, etc.)
- General nutritional recommendations to support short term, explosive (creatine phosphate dominant) sports and activities (e.g. volleyball, golf, athletic field events, max strength training, etc.)¹²
- The available legal ergogenic aids, i.e., sports drinks, protein shakes and caffeine.

Recommended learning hours for this content: 25-35h

Recommended evaluations: written.

3.5 - Psychosocial Aspects of Health and Fitness

Learners should demonstrate knowledge and understanding of:

- The different underlying motives for exercise, and the concepts of internal and external motivation
- The psychosocial aspects of health and fitness which are influential to health and fitness-related behavior and behavior change, including motivators and barriers (e.g., perceptions about risks, benefits, personal capability, social acceptance, opportunities, resources, etc.)
- The selection of an appropriate behavioural goal and the suggested method to evaluate goal achievement for each stage of change
- Signs and symptoms of stress, the effects of stress on health and strategies for dealing with stress
- Building rapport:
 - The importance of connecting with people: body language: posture – eye contact, facial expression, vocal tonality (tempo, intensity, voice inflection)
 - Primacy effects: smiling, mimicking, etc.
 - Using sensory communication (visual, auditory, kinaesthetic pattern) to improve communication and orientation of the client
 - Developing “importance”, “confidence” and “readiness”
 - Dealing with resistance to change
 - Using open-ended question, reflecting answering, summarising
- Motivational strategies:
 - The most appropriate and effective behaviour change strategies to enhance exercise and health behaviour change, based upon the individual client’s needs and barriers (e.g., goal setting, action planning, social support, problem solving, reinforcement strategies, self-monitoring, etc.)

¹² The intention is not to focus on the specific sports, but to consider the general category of activities and how energy demands vary in line with the energy systems utilised and, how this should affect macronutrient intakes and other supportive, food-oriented nutritional requirements.

- Using the sensory representational system (visual, auditory, kinesthetic) to optimise an individual's training session
- Relapse prevention: planning, problem solving, identifying and changing negative thinking.

Recommended learning hours for this content: 25-35h

Recommended evaluations: written.

3.6 - Health and Fitness Assessment: Collecting and Analysing Information

3.6.1 Components of Fitness

Learners should demonstrate knowledge and understanding of:

- The three different somatotypes (endomorph, ectomorph and mesomorph) focusing on the implications of each body type for exercise capacity and the ability to alter body shape
- Anatomical and hormonal differences concerning males and females and their influence on safe, effective and appropriate physical activity
- The health and skill-related components of total fitness and their definitions (ACSM 2017) to include:
 - Health-related: muscular strength, muscular endurance, cardiorespiratory endurance (heart and lungs), flexibility and body composition
 - Skill-related: balance (static and dynamic), coordination, reaction time, power and agility.

3.6.2 Collecting and Analysing Information

Learners should demonstrate knowledge and understanding of:

- Appropriate information relevant to the ability to negotiate goals that are Specific, Measurable, Achievable, Realistic, Time bound to plan and carry out safe and effective programmes and, enable thorough evaluation of planning options
- Correct screening procedures for:
 - Physical; previous and current level of activity and interests. Various forms of evaluation of current levels of all components of fitness - muscular strength, muscular endurance, cardio-pulmonary fitness, flexibility and motor skills (balance and coordination)
 - Psychological; motivation to participate, perceived and actual barriers to participation, stage of readiness to participate and stated future goals and aspirations
 - Medical; health history, current health status, particularly in relation to risk factors for heart disease, the identification of medical conditions that would necessitate medical clearance and past and present injuries and disabilities

- Lifestyle; work patterns, eating patterns, relevant personal circumstances, likes, dislikes and preferences for physical activity
- The screening process to identify: risk factors for coronary heart disease; factors that limit the ability to participate/achieve goals; those requiring a referral to an appropriate medical professional or other clinician or medically supervised exercise programme
- How to adapt basic programmes for participants with particular needs including: sedentary, over-trained, peak performer, sport specific performer.
- How to identify and refer to other professionals the participants with particular needs including: recovering from injury, obese, suffering from chronic disease, musculoskeletal disorders, etc.
- The importance, conditions, contraindications and own professional limitations in the use of medical questionnaires intended for qualified health personnel (medical clearance, psychological questionnaires, lifestyle questionnaires, etc.), advanced fitness assessments¹³, and contraindications and limitations for testing including termination criteria
- Appropriate use of:
 - Informed consent
 - Questionnaires: Physical Activity Readiness Questionnaire (PAR-Q+ 2017)¹⁴, lifestyle and behavioural questionnaires, etc.
 - Fitness assessments: functional assessments (e.g., postural, movement, core, balance, and flexibility), and physical assessments (e.g., anthropometric measurements and body composition, cardiorespiratory fitness, muscular strength, power and endurance)

Recommended learning hours for this content¹⁵: 25-35h

Recommended evaluations: written and practical.

3.7 - Training Adaptation and Exercise Planning and Programming

3.7.1 Training Adaptation

Learners should demonstrate knowledge and understanding of:

- The principles of adaptation and modification for each fitness component
- The continuum between muscular strength (predominantly type 2 fibres) and muscular endurance (type 1 fibres) and neuromuscular efficiency
- Muscular strength influenced by use of high resistance and low repetitions so that motor unit recruitment is maximised and contractile limits are reached
- Muscular endurance enhanced by lower resistance loads and higher repetitions resulting in the build-up of lactic acid and inducing inhibition of further muscle contraction

¹³ i.e., advanced gym-based testing

¹⁴ Or other similar tools available (e.g., Get Active Questionnaire: <http://www.csep.ca/en/publications/get-active-questionnaire>)

¹⁵ Including face-to-face teaching, distance learning/online study, or blended study.

- Increased endurance capacity in muscles developed between exercise sessions by the acquisition of increased numbers of mitochondria, oxidative enzymes and capillaries leading to increased oxidative ability within muscles
- The repetition ranges for strength, power, endurance and muscle hypertrophy
- The range of heart rate training zone models (e.g., aerobic training zone, fitness zone) for developing aerobic and anaerobic capacity
- Interval, fartlek principles and practical application
- The principles of training including specificity, progressive overload, reversibility, adaptability, individuality and recovery time
- The effects of health-related physical activities, to include resistance training (e.g., improved posture, reduced risk of joint and soft tissue injuries, increased bone density, improved neuromuscular efficiency, etc.), cardiorespiratory training (reduced risk of CHD, improved body composition, etc.) and range of motion training
- The principles of periodised training programmes in developing components of fitness
- The use of short, medium and long-term goals (micro, meso and macro-cycles)
- The use of volume vs. intensity through the periodisation stages
- The various methods of range of motion (flexibility) training, the advantages and disadvantages of each, including static, ballistic, dynamic and proprioceptive neuromuscular techniques (including myotatic) to facilitate increased range of motion
- The role of the muscle spindle cells and the Golgi tendon organs in these mechanisms (including myotatic reflexes, Contract-Relax-Antagonist-Contract)
- The current ACSM or other recognised international guidelines for developing the different components of fitness, emphasising the distinction between activity for health and exercise for health and fitness, from evidence-based information
- The importance of adequate rest phases between training loads and the signs and symptoms of overtraining
- The principles of exercise prescription - **F**requency **I**ntensity **T**ime **T**ype **V**olume **P**rogression - for health and skill-related components of fitness
- The importance of the quality of instruction in order to have clients understand the information, perform the exercises with proper technique, efficacy and safety, and increase their self-efficacy and motivation.

Recommended learning hours for this content¹⁶: 25-35h

Recommended evaluations: written and practical.

3.7.2 Exercise Planning and Programming

Learners should demonstrate knowledge and understanding of:

- The principles of overload, specificity, progression and general adaptations and how they relate to exercise programming and a variety of individual wants, goals and needs
- The signs and symptoms of excessive effort that would indicate the need for a change of intensity
- The ability to select appropriate equipment and recognise correct exercise technique to include appropriate positioning and general safety considerations

¹⁶ Including face-to-face teaching, distance learning/online study, or blended study.

- Training variables to include:
 - Choice of exercises
 - Intensity of exercises
 - Sequence of exercises
 - Resistance and number of repetitions
 - Number of sets
 - Rest between sets (recovery)
 - Speed of movement
 - Type of muscle contraction
 - Duration of session
 - Rest between sessions
 - Volume of training
 - Split routines
- The use of the above variables to develop strength, endurance, hypertrophy, speed, power
- The advantages and disadvantages of exercising at various intensities for: sedentary (untrained) experienced (trained), high performers (well trained)
- Calculations of repetition maximums (1RM – 10RM)
- Commonly used evidence-based resistance training systems to include:
 - Single set training
 - Circuit resistance training
 - Basic sets
 - Supersetting (agonist/antagonist)
 - Supersetting 2 exercises for the same muscle
 - Pyramid systems
 - Forced repetitions
- Commonly used cardiorespiratory training systems to include:
 - Interval
 - Fartlek
 - Aerobic
 - Anaerobic
 - Peripheral Heart Action training
- The suitability of each training system for the client, when fitness levels and goals are considered
- Safe and effective use of equipment
- The basic principles of progressive programming
- The reasons for using periodisation
- The basic principles of periodisation to include: the main two variables, volume and intensity
- Macrocycles (long-term), mesocycles (medium-term), microcycles (short-term)
- Teaching strategies to enhance individual performance
- Appropriate methods to adjust programmes to meet the changing needs and circumstances of clients
- Methods of monitoring exercise intensity to include:
 - Maximum heart rate formulae (Gellish et al., 2007)
 - Rate of Perceived Exertion (RPE) scales, both 6-20 and 1-10
 - Metabolic equivalents (METs)
 - Kilocalories per minute (Kcal/min)

- Visual assessment and verbal assessment (talk test)
- Understand own limitations and when to refer clients to other relevant professionals, e.g., exercise specialist, exercise physiologist, nutritionist, physiotherapist, medical professionals

Recommended learning hours for this content¹⁷: 25-35h

Recommended evaluations: written and practical.

3.8 – Business and Marketing Skills for Personal Trainers

Learners should demonstrate understanding of:

- The legal and other requirements for a self-employed Personal Trainer
- Budgeting and financial management in a personal training business
- The sales cycle
- Risk analysis
- Consumer behaviour and how it influences the buying decision
- How sales targets are calculated and used
- The employee-model and independent-contractor model
- The importance of the business plan and the marketing plan to achieve goals
- The importance of insurance requirements

Learners should demonstrate knowledge of:

- How to set up and implement an effective marketing strategy for a personal training business
- How to start up a personal training business and the business planning and promotion process
- How to sell personal training, e.g., how to sell face-to-face; how to close a sale
- How to find and qualify sales leads
- Which are the most effective attracting and promoting tools and how to carry them out
- How to use information technology applications in the business planning process and to monitor and analyse business data
- How to use communication tools to achieve goals
- The one-to-one and the small group training-model
- How to improve client retention
- How to develop a SWOT¹⁸ analysis of their service
- The popular marketing activities in the field of sport for all
- The importance of developing a clear business brand that will appeal to target clientele and represent what the business stands for
- How to develop a suite of PT products and services that will appeal to target clientele and meet their needs
- The importance of a website in PT marketing
- How to leverage blogs/vlogs and social media technology in PT marketing

¹⁷ Including face-to-face teaching, distance learning/online study, or blended study.

¹⁸ Strengths, Weaknesses, Opportunities and Threats.

Recommended learning hours for this content: 25-35h
Recommended evaluations: written.

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¹⁹ There are other references available in other languages.

IV - EuropeActive Personal Trainer - EQF L4 - Standards and Competencies Framework

This document describes the EuropeActive Competence Framework and contains the essential competences, associated with skills and knowledge written as learning outcomes, based on occupational purposes, required to work as a Personal Trainer in the European Health and Fitness Industry at the EQF-Fitness Level 4. The Competence Framework and Standards are purpose and outcome driven and, are aligned with the industry's main goal to get 'more people, more active, more often'.

4.1 - Role of the PT

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies	SKILLS Learners should be able to demonstrate the following skills	RANGE Learners should be able to cover the following range	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:
Follow a Professionalism and Ethics Code of Practice	Demonstrate responsibility and professional duty of care to clients	<ul style="list-style-type: none"> Ethics and professional conduct Legal responsibilities Client safety and wellbeing Compliance with National Health and Safety policies 	1.1 Professionalism, Code of Practice/Ethics/National Standards and Guidelines (EUROPEACTIVE/EREPS Code)
Provide interactive communication with club members	Demonstrate proper presentation and communication skills, and customer care orientation	<ul style="list-style-type: none"> Basic procedures to introduce him/herself to new clients. General rules for customer care Basic principles of customer care to include perceived benefits Methods and practices, which contribute to effective customer care Skills of effective customer care: communication, body language, negotiation 	1.2 Presentation and communication 3.5 Psychosocial aspects of health & fitness
Inform clients of the benefits of a healthy lifestyle	a. Educate clients on the components of a healthy lifestyle and the health	<ul style="list-style-type: none"> Active lifestyle Nutrition Stress management 	1.3 Health Promotion

	implications for each component	<ul style="list-style-type: none"> • Addictions • Physical activity outside the gym • Excess sitting • Effects on health and wellbeing 	
	b. Provide clients with accurate information about recommended amounts of physical activity required to achieve health and fitness benefits	<ul style="list-style-type: none"> • Most updated exercise guidelines from appropriate national or international authorities 	1.3 Health Promotion
Plan and prepare for an exercise session	a. Collect, record and analyse accurate information about the facility and the participant	<ul style="list-style-type: none"> • The facility <ul style="list-style-type: none"> ○ Size ○ Access, ○ Equipment • The participant <ul style="list-style-type: none"> ○ Fitness level ○ Skill level ○ Health history ○ Aims of the participant 	1.4 Plan and Deliver Personal Training
	b. Set aims and objectives for the session in line with the needs of the client and the overall programme	<ul style="list-style-type: none"> • Exercise goals • Client needs • Components of fitness • Category of client <ul style="list-style-type: none"> ○ Beginner ○ Intermediate ○ Advanced • Injury and medical status 	1.4 Plan and Deliver Personal Training
	c. Design the exercise session	<ul style="list-style-type: none"> • Session type <ul style="list-style-type: none"> ○ Gym-based ○ Studio-based ○ Water-based ○ Sports hall ○ Outdoors ○ Client's home or other 	1.4 Plan and Deliver Personal Training

		confined space	
	d. Select modes of exercise within sessions	<ul style="list-style-type: none"> • Resistance training (resistance machines, free weights, body weight) • Cardiovascular training • Flexibility training • Posture & core stability training • Water-based • Home-based or confined space • Outdoor-based • Mind – body exercise • Alternative exercise modes 	1.4 Plan and Deliver Personal Training 7.2 Exercise Planning & Programming
	e. Select activities and exercises for the session	<ul style="list-style-type: none"> • Appropriate to phase and goals of the session • Appropriate to the abilities of the client • Assisted activities and modification • Functional activities • Proprioceptive training • Planned activities • Unplanned activities 	1.4 Plan and Deliver Personal Training
	f. Plan timings and sequences for the session	<ul style="list-style-type: none"> • Effective balance of: <ul style="list-style-type: none"> ○ Instruction ○ Activity ○ Discussion 	1.4 Plan and Deliver Personal Training
	g. Assess and minimise risks before the session	<ul style="list-style-type: none"> • Facility • Equipment • Activities • Participants • Emergency procedures 	1.4 Plan and Deliver Personal Training
Teach client planned activities for the session	a. Utilise appropriate teaching methods and skills	<ul style="list-style-type: none"> • Communication: <ul style="list-style-type: none"> ○ Verbal – clear, concise, specific ○ Using understandable terminology ○ Non-verbal – demonstration 	1.4 Plan and Deliver Personal Training

		<ul style="list-style-type: none"> ○ Individual management skills ○ Creativity and improvisation 	
	b. Observe and monitor participant in the session	<ul style="list-style-type: none"> • Safety • Intensity • Discomfort • Technique 	1.4 Plan and Deliver Personal Training
	c. Assess participant performance	<ul style="list-style-type: none"> • Identify errors • Client feedback 	1.4 Plan and Deliver Personal Training
	d. Correct and improve participant performance	<ul style="list-style-type: none"> • Correct technique • Provide instruction points • Feedback • Encouragement • Reinforcement 	1.4 Plan and Deliver Personal Training
	e. Ensure explanations and demonstrations are technically correct, observable, relevant, safe and appropriate to the participants	<ul style="list-style-type: none"> • Range of alternative exercises • How to break exercise movements down into their components • How to develop clients' co-ordination • Trainer technique & position • Appropriate to participant category 	7.2 Exercise Planning & Programming 1.4 Plan and Deliver Personal Training
	f. Adapt activities during the session	<ul style="list-style-type: none"> • Due to: <ul style="list-style-type: none"> ○ Client needs and abilities ○ Equipment & facility ○ Weather 	1.4 Plan and Deliver Personal Training
	g. Ensure participants carry out activities in a safe manner	<ul style="list-style-type: none"> • Technically correct • Safe and effective alignment of exercises • Appropriate to client needs and abilities 	1.4 Plan and Deliver Personal Training
	h. Ensure all phases of the session plan are delivered safely and effectively within time constraints	<ul style="list-style-type: none"> • Time management 	1.4 Plan and Deliver Personal Training
	i. Ensure participant's	<ul style="list-style-type: none"> • Give opportunity for feedback 	1.4 Plan and Deliver

	understanding of explanations and instructions		Personal Training
	j. Use of motivational strategies		1.4 Plan and Deliver Personal Training
	k. Make the best use of the environment in which the client is exercising	<ul style="list-style-type: none"> • Gym • Studio/sports hall • Outdoors • Client's home or other confined space 	1.4 Plan and Deliver Personal Training
	l. Follow the relevant guidelines for hands-on-contact with clients	<ul style="list-style-type: none"> • Code of Ethics • Health and safety guidelines 	1.1 Professionalism, Code of Practice/Ethics/National Standards and Guidelines 7.2 Exercise Planning & Programming
	m. Utilise a range of advanced training techniques with the client	<ul style="list-style-type: none"> • Advanced resistance training systems • Advanced cardiovascular training systems • Others 	7.2 Exercise Planning & Programming
	n. End the session, including the use of cool down activities that are safe and effective for the participants	<ul style="list-style-type: none"> • Using cool down activities appropriate to the session • Give participant opportunity to ask questions and provide feedback • Provide feedback to participants on performance and future sessions 	1.4 Plan and Deliver Personal Training
Evaluate the session and personal performance	a. Evaluate the session	<ul style="list-style-type: none"> • Against: <ul style="list-style-type: none"> ○ Session aims, ○ Goals ○ Activities ○ Participant performance ○ Own performance (preparation, delivery) 	1.4 Plan and Deliver Personal Training 7.2 Exercise Planning & Programming

		<ul style="list-style-type: none"> ○ Health and safety 	
	b. Amend and improve future session plans and own performance based on evaluation and feedback	<ul style="list-style-type: none"> • Record changes using appropriate format and systems • Identify strategies to improve performance • Review progress on an on-going basis 	1.4 Plan and Deliver Personal Training
Review and modify the programme on a sessional basis as appropriate to client progress	a. Obtain feedback from the client on progress with the programme following initial induction to the programme	<ul style="list-style-type: none"> • Varied techniques to obtain feedback: <ul style="list-style-type: none"> ○ Instructor observation of client performance ○ Frequent reviews to determine: <ul style="list-style-type: none"> ▪ Client perception of personal progress ▪ Client satisfaction with programme 	1.4 Plan and Deliver Personal Training
	b. Modify programme according to client progress following initial induction to the programme	<ul style="list-style-type: none"> • According to: <ul style="list-style-type: none"> ○ Individual activities ○ Exercise intensity ○ Client goals ○ Changes in circumstances • Incorporating: <ul style="list-style-type: none"> ○ Principles of training ○ Knowledge of health- related components of fitness ○ Knowledge of exercise anatomy, physiology and biomechanics • Record modifications 	1.4 Plan and Deliver Personal Training
	c. Give feedback to the client based on review	<ul style="list-style-type: none"> • Timely • Positive • Relevant to goals 	1.4 Plan and Deliver Personal Training
Monitor, evaluate and adjust	a. Undertake regular	<ul style="list-style-type: none"> • Category of client 	1.4 Plan and Deliver

programmes for individuals and groups	assessments to monitor client progress and achievement of goals	<ul style="list-style-type: none"> • Individual or group assessment • Stage of fitness • Components of fitness • Appropriate to activity and programme • Lifestyle • Fitness levels • Adherence • Satisfaction 	Personal Training
	b. Review client goals based on results	<ul style="list-style-type: none"> • Long-term and short-term goals • Category of client • Individual or group • Stage of fitness • Client needs, abilities, lifestyle and preferences 	1.4 Plan and Deliver Personal Training
	c. Revise programme based on results and revised goals	<ul style="list-style-type: none"> • Components of fitness • Stage of fitness • Client needs, abilities and lifestyle • Exercise preferences • Available resources, services, time 	1.4 Plan and Deliver Personal Training
	d. Maintain contact with clients between sessions and maintain their motivation	<ul style="list-style-type: none"> • Phone calls • Emails • Meetings 	1.4 Plan and Deliver Personal Training

<p>Use appropriate technological developments to help clients increase general activity levels and improve health and fitness level</p>	<p>a. Describe how technological innovation can support the client (active living).</p>	<p>Be able to use:</p> <ul style="list-style-type: none"> • heart rate monitors • wearables • mobile phone applications 	<p>1.5 Use current technology</p>
	<p>b. Use technology to support the effective delivery of exercise</p>	<ul style="list-style-type: none"> • Collect, record, monitor, analyse and interpret data from wearables 	<p>1.5 Use current technology</p>
	<p>c. Use technologies to offer a better service and to increase motivation and adherence to physical activity</p>	<ul style="list-style-type: none"> • Explain to client how to choose and use technology and mobile applications 	<p>1.5 Use current technology</p>

4.2 - Functional Anatomy

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies	SKILLS Learners should be able to demonstrate the following skills	RANGE Learners should be able to cover the following range	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:
Integrate exercise science (as identified at the knowledge doc) to the design of the programme	a. Apply knowledge of the musculoskeletal system to programme design	<ul style="list-style-type: none"> • Musculoskeletal structure: <ul style="list-style-type: none"> ○ Components ○ Muscles, bones, joints, ligaments and tendons ○ Function ○ Types of muscles, bones and joints ○ Locations ○ Action ○ Directional and anatomical terminology • Muscle physiology: <ul style="list-style-type: none"> ○ Structure ○ Contraction ○ Muscle groups • Postural abnormalities • Physiological adaptations to exercise • Measuring exercise response • Exercise risks 	<p>2.1 Functional Kinesiology/Biomechanics</p> <p>2.2 Muscles</p>
	b. Apply knowledge of the biomechanical concepts, as they relate to movement and exercise, to programme design	<ul style="list-style-type: none"> • Biomechanical concepts: <ul style="list-style-type: none"> ○ Centre of gravity ○ Stability ○ Momentum ○ Inertia ○ Alignment ○ Levers ○ Torque 	<p>2.1 Functional Kinesiology/Biomechanics</p> <p>2.2 Muscles</p>

		<ul style="list-style-type: none"> ○ Base of support ○ Balance • Resistance training: <ul style="list-style-type: none"> ○ Resistance ○ Force ○ Axis ○ Variables of equipment and resistance • Exercise intensity • Exercise safety and contraindications 	
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4.3 - Physiology

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies	SKILLS Learners should be able to demonstrate the following skills	RANGE Learners should be able to cover the following range	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:
Integrate Exercise Science (as identified at the knowledge doc) to the design of the programme	a. Apply knowledge of related physiological concepts to programme design	<ul style="list-style-type: none"> • Nervous and endocrine system • Overtraining • Effects of various environmental conditions on exercise response: <ul style="list-style-type: none"> ○ Temperature ○ Altitude ○ Pollution • Effects of various individual factors on exercise response: <ul style="list-style-type: none"> ○ Hydration ○ Performance-enhancing substances ○ Alcohol, smoking and recreational drugs ○ Gender ○ Age 	3.1 Energy Systems 3.3 Nervous & Endocrine System

		<ul style="list-style-type: none"> ○ Genetic factors ○ Body type ○ Pregnancy 	
	b. Apply knowledge of the energy systems to programme design	<ul style="list-style-type: none"> • The effect of different exercise on the three energy systems: <ul style="list-style-type: none"> ○ Type of exercise ○ Intensity ○ Duration ○ Fitness level ○ Nutritional level ○ Training mode • Calorie expenditure of different activities by: <ul style="list-style-type: none"> ○ Body weight ○ MET ○ Duration of exercise 	3.1 Energy Systems
	c. Apply knowledge of the cardiorespiratory system and energy systems to programme design	<ul style="list-style-type: none"> • Structure and function of the cardiorespiratory system • Cardiac cycle • Transport and gaseous exchange • Aerobic and anaerobic systems: <ul style="list-style-type: none"> ○ Processes, function and metabolic products • Heart rate response to exercise: <ul style="list-style-type: none"> ○ Long-term and short-term ○ Measurement of heart rate response • Oxygen demands of different activities • Physiological adaptations to exercise 	3.2 Cardiorespiratory System 3.1 Energy Systems

4.4 - Nutrition

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies	SKILLS Learners should be able to demonstrate the following skills	RANGE Learners should be able to cover the following range	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:
Inform clients of the benefits of a healthy lifestyle	Provide participants with accurate information on principles of nutrition and weight management	<ul style="list-style-type: none"> • Dietary role of and common dietary sources • Balance between saturated and unsaturated fatty acid and effects on health • Right intake of essential fatty acids and effects on health • Role of vitamins and minerals • Role and desirable levels of total cholesterol, HDLs and LDLs • Examples of the four basic food groups, vitamins and minerals • Components of energy balance • Methods to estimate calorie requirements • Healthy eating patterns • Dietary intake influences on health • Lifestyle advice, to include use of tobacco, alcohol, caffeine (current government guidelines) • Energy needs for different activities/sports/fitness plans • Role of carbohydrate, fat and protein as fuels for aerobic and anaerobic exercise • Eating patterns for weight (fat) loss/gain; energy balance; appropriate 'weight' loss goals • Appropriate referral/advice 	4. Nutrition

		organisations <ul style="list-style-type: none"> • Analysis of current weight-loss fads and popular diets 	
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4.5 - Psychosocial Aspects of Health and Fitness

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies	SKILLS Learners should be able to demonstrate the following skills	RANGE Learners should be able to cover the following range	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:
Identify participants incentives and barriers to participate in exercise	a. Recognise psychosocial aspects which are influential to health and fitness-related behaviour and behaviour change and, barriers to exercise	<ul style="list-style-type: none"> • Internal and external motivation • Motivators and barriers: <ul style="list-style-type: none"> ◦ Perceptions about risks, benefits ◦ Personal capability ◦ Social acceptance ◦ Opportunities ◦ Resources • Relapse prevention: <ul style="list-style-type: none"> ◦ Planning ◦ Problem solving ◦ Identifying and changing negative thinking 	5. Psychosocial aspects of health & fitness
	b. Apply basic cognitive-behavioural intervention strategies	<ul style="list-style-type: none"> • Goal setting • Cueing • Action planning • Problem solving • Reinforcement strategies • Self-monitoring 	5. Psychosocial aspects of health & fitness
	c. Provide participants with accurate information on stress management	<ul style="list-style-type: none"> • Symptoms of stress • Effect of stress on health • Strategies dealing with stress 	Please refer to level 3
Enthuse and motivate clients to develop and maintain their	Capability to develop rapport in order to motivate individuals to	<ul style="list-style-type: none"> • Body language: <ul style="list-style-type: none"> ◦ Posture – eye contact 	5 Psychosocial aspects of health & fitness

fitness	begin, adhere and /or return to exercise early	<ul style="list-style-type: none"> ○ Facial expression ○ Vocal tonality ○ Smiling, mimicking • Sensory communication • Open-ended questioning, reflecting answering, summarising • Dealing with resistance to change 	1.2 Presentation and communication
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4.6 - Health and Fitness Assessment: Collecting and Analysing Information

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies	SKILLS Learners should be able to demonstrate the following skills	RANGE Learners should be able to cover the following range	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:
	a. Apply the knowledge of body types, sex differences and components of total fitness to the design of an individual programme	<ul style="list-style-type: none"> • Somatotypes • Anatomical and hormonal differences • Total fitness components <ul style="list-style-type: none"> ○ Health related ○ Skill related 	6.1 Components of Fitness
Collect information about the client	a. Negotiate the goals which will help to plan a safe and effective programme through evaluation	<ul style="list-style-type: none"> • Specific • Measurable • Achievable • Realistic • Time bound 	6.2 Collecting and Analysing Information
	b. Identify the information which should be collected	<ul style="list-style-type: none"> • Client personal goals and expectations • Level of physical activity • Level of fitness • Lifestyle • Medical, health and exercise 	6.2 Collecting and Analysing Information

		<ul style="list-style-type: none"> history • Attitude and motivation • Stage of change/readiness • Barriers to exercise • Exercise preferences 	
	c. Select assessments appropriate to the category of client	<ul style="list-style-type: none"> • Medical and injury status • Stage of fitness: <ul style="list-style-type: none"> ○ Beginner ○ Intermediate ○ Advanced ○ Training phase: <ul style="list-style-type: none"> ○ Sedentary ○ Overtrained ○ Peak performer ○ Sport specific performer 	6.2 Collecting and Analysing Information
	d. Advise client of correct procedures, protocols and risks prior to commencing physical assessment	<ul style="list-style-type: none"> • Assessment protocols • Health concerns • Risks • Safety • Dress 	6.2 Collecting and Analysing Information
	e. Seek and receive information from and refer to other health and medical professionals concerning the client when required	<ul style="list-style-type: none"> • General practitioner • Physiologist • Physiotherapist • Neuromuscular therapist • Other consultants 	6.2 Collecting and Analysing Information
	f. Collect information about the client using approved methods and techniques	<ul style="list-style-type: none"> • Interview • Observation • Medical questionnaires: <ul style="list-style-type: none"> ○ PAR-Q Questionnaire ○ Informed consent ○ Lifestyle questionnaire • Fitness assessment – functional: <ul style="list-style-type: none"> ○ Postural (static and dynamic) 	6.2 Collecting and Analysing Information

		<ul style="list-style-type: none"> ○ Movement ○ Core ○ Balance ○ Flexibility ○ Fitness assessment -physiological: <ul style="list-style-type: none"> ○ Anthropometric measurement ○ Body composition ○ Cardiorespiratory fitness ○ Muscular strength and endurance 	
Record information	a. Record information in an effective manner	<ul style="list-style-type: none"> • Accuracy • Interview data • Questionnaire results • Fitness assessment results 	6.2 Collecting and Analysing Information
	b. Apply basic IT /admin skills to filing and maintaining records	<ul style="list-style-type: none"> • Accuracy • Facilitate analysis • Maintain client confidentiality • In a standard format to be used and understood by other professionals • In language understood by other professionals • Use of different IT packages • Filing systems 	6.2 Collecting and Analysing Information 1.5 Use current technology
Analyse information and determine risk factors	a. Interpret all recorded data using accepted criteria	<ul style="list-style-type: none"> • All data gathered • Using standard criteria • Norms 	6.2 Collecting and Analysing Information 1.5 Use current technology
	b. Prioritise key needs and responses	<ul style="list-style-type: none"> • According to client health status • According to client fitness status • According to client expectations 	6.2 Collecting and Analysing Information
	c. Identify and prioritise risk factors	<ul style="list-style-type: none"> • Medical, physical and psychological 	6.2 Collecting and Analysing

		<ul style="list-style-type: none"> • Injury status • Fitness levels • Factors that might affect client ability to participate in the programme 	Information
	d. Review and confirm data with client	<ul style="list-style-type: none"> • Clarify data • Utilising communication and interpersonal skills 	1.3 Communication
	e. Develop a summary profile of client to assist in the design of a programme to meet client needs	<ul style="list-style-type: none"> • Collate and categorise data 	6.2 Collecting and Analysing Information
Inform client of analysis and discuss and agree the outcomes	a. Present results to client in an effective manner	<ul style="list-style-type: none"> • Language and terms understood by client • Simplify technical information • Communication and interpersonal skills 	1.3 Communication
	b. Discuss the results	<ul style="list-style-type: none"> • In relation to: <ul style="list-style-type: none"> ○ Standard norms ○ Client lifestyle practices ○ Potential implications 	1.3 Communication
	c. Educate clients on the benefits of a fitness programme and positive lifestyle practices	<ul style="list-style-type: none"> • Physical, mental, social and health • In relation to current client practices and status • Positive lifestyle practices • Behaviour practices • Respond to client queries 	1.3 Communication
Identify factors and where necessary refer the client to a more appropriate professional	a. Understand and apply guidelines for referral	<ul style="list-style-type: none"> • Industry guidelines • Facility guidelines • National guidelines 	6.2 Collecting and Analysing Information
	b. Refer client to appropriate professional	<ul style="list-style-type: none"> • Standard criteria for referral • Professionals for referral 	6.2 Collecting and Analysing Information

4.7 - Training Adaptation and Exercise Planning and Programming

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies	SKILLS Learners should be able to demonstrate the following skills	RANGE Learners should be able to cover the following range	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:
Integrate the science related to the training process to programme design	Apply the knowledge of training adaptations to programme design	<ul style="list-style-type: none"> • Principles of adaptation • The continuum in neuromuscular adaptation • Muscular strength & endurance • Increased endurance capacity • Repetition ranges for strength, power, endurance and muscle hypertrophy • Range of heart rate training zones • Interval, fartlek principles and practical application • Principles of training • Effects of health-related physical activities • Principles of periodised training programmes • Use of short, medium and long-term goals (micro, meso and macrocycles) • Use of volume vs. intensity through the periodisation stages • Methods for range of motion (flexibility) training • Current recognised international guidelines • Importance of adequate rest phases between training loads 	7.1 Training Adaptation 7.2 Exercise Planning & Programming

		<ul style="list-style-type: none"> • Signs and symptoms of overtraining • Principles of exercise prescription (FITT) for health and skill-related components of fitness 	
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4.8 – Business and Marketing Skills for Personal Trainers

WORKPLACE COMPETENCY Learners should be able to demonstrate the following competencies	SKILLS Learners should be able to demonstrate the following skills	RANGE Learners should be able to cover the following range	UNDERPINNING KNOWLEDGE Learners should demonstrate knowledge and understanding of:
Integrate knowledge for own business development	Apply knowledge of business management in a personal training business	<ul style="list-style-type: none"> • How to start business: <ul style="list-style-type: none"> ◦ Legal requirement for self-employed personal trainer ◦ Budgeting and financial management ◦ Sales cycle ◦ Risk analysis ◦ Consumer behaviour • Business and marketing plan <ul style="list-style-type: none"> ◦ Effective marketing strategy <ul style="list-style-type: none"> ◦ Promotion process ◦ Selling (face-to-face; how to close a sale; sales leads) ◦ Use of effective tools, technology application for business planning, monitoring and analysing data • Different training models: <ul style="list-style-type: none"> ◦ One-to-one ◦ Small group training 	4.8 Business and marketing skills for personal trainers 1.5 Use current technology

		<ul style="list-style-type: none">• Client retention• SWOT analysis of service	
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