

Higher National Unit Specification

General information for centres

Unit title: Fitness Testing for Sport

Unit code: DD31 34

Unit purpose: This Unit aims to give candidates an awareness of the key issues relating to the fitness testing of sports performers. This unit combines practical and theoretical elements relating to the selection, application and evaluation of appropriate fitness testing protocols. It is mainly aimed at field-based fitness testing, but direct physiological assessment of specific fitness components can be used where facilities permit.

On completion of this Unit, the candidate will be able to:

1. Describe the key factors relating to fitness testing and test selection
2. Select and apply appropriate fitness tests for a specific sport/event.
3. Analyse, interpret and provide feedback on fitness test results.

Credit value: 1 HN Credit at SCQF level 7: (8 SCOTCAT credit points at SCQF level 7*)

**SCOTCAT points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCOTCAT points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to doctorates.*

Recommended prior knowledge and skills: Candidates should possess good written and oral communication skills. Other knowledge skills or experience relevant to the Unit would also be beneficial. Ultimately, entry is at the discretion of the centre.

Core skills: There may be opportunities to gather evidence toward core skills within this Unit, although there is no automatic certification of core skills or core skills components in this Unit.

Context for delivery: If this Unit is delivered as part of a group award, it is recommended that it be taught and assessed within the subject area of the group award to which it contributes. This Unit is included in the framework for HNC/D Sports Coaching with Development of Sport.

Assessment: Candidates should demonstrate a clear grasp of the theoretical knowledge of the Unit, and be able to demonstrate practical competency in applying fitness tests. A closed book test of restricted response questions will be used for Outcome 1. Outcome 2 will be assessed by means of a practical assessment and evidence portfolio. Outcome 3 will be assessed by means of a written project of 500 words, where candidates analyse and interpret test results, and provide feedback in relation to these results.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Describe the key factors relating to fitness testing and test selection.

Knowledge and/or skills

- Benefits of Fitness Testing.
- Identify Screening Procedures.
- Definitions: Validity; reliability; objectivity.
- Purpose of screening and fitness test protocols.

Evidence requirements

To achieve this outcome, each candidate will have to provide written evidence to demonstrate their understanding of all aspects of the knowledge and skills section. The assessment instrument will be a restricted response question paper of 4 questions (One for each of the knowledge and skills). The candidates will require to satisfactorily cover all of the knowledge and skills section.

Assessment guidelines

Written evidence that the candidate can describe the key issues relating to fitness testing and test selection. The assessment should be completed in a supervised environment.

Higher National Unit specification: statement of standards (cont)

Unit title: Fitness Testing for Sport

Outcome 2

Select and apply appropriate fitness tests for a specific sport/event.

Knowledge and/or skills

- Pre-test preparation.
- Informed Consent
- Apply Screening Procedures.
- Choice of appropriate Fitness tests
- Application of testing protocols.
- Accurate recording of results.

Evidence requirements

To achieve this outcome each candidate will be required to demonstrate competence in selecting and applying screening procedures as well as being required to produce written evidence to demonstrate their understanding of all aspects of the knowledge and skills section. The assessment will take the form of a practical assessment where the candidate is required to administer at least 2 screening procedures and at least 5 fitness tests. The candidate must also submit an evidence portfolio, which contains: (i) A pre-testing checklist; (ii) A signed informed consent form; (iii) A signed health-screening questionnaire; and (iv) A record of screening and fitness test results.

Assessment guidelines

The candidate will be required to produce practical and written evidence that he /she can apply appropriate screening procedures, select and apply fitness tests for a specific sport/event. This assessment will be undertaken in indoor and/or outdoor environments as appropriate, under supervision. The candidates will be assessed on an individual basis.

Outcome 3

Analyse, interpret and provide feedback on fitness test results.

Knowledge and/or skills

- Accurate analysis and interpretation of test results.
- Accurate written feedback of test results.
- Guidelines for future fitness training.

Higher National Unit specification: statement of standards (cont)

Unit title: Fitness Testing for Sport

Evidence requirements

To achieve this outcome each candidate will be required to provide written evidence to demonstrate their understanding of all aspects of the knowledge and / or skills section. The instrument of assessment will be a report of 500 words, where the candidate must present their analysis and recommendations from fitness test results (gathered in Outcome 2) which will be given to the client. All of the section on Knowledge and Skills must be satisfactorily covered.

Assessment guidelines

Written evidence the candidate can analyse, interpret and provide feedback on fitness test results.

Administrative Information

Unit code: DD31 34

Unit title: Fitness Testing for Sport

Superclass category: MD

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Higher National Unit specification: support notes

Unit title: Fitness Testing for Sport

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit should emphasise both the importance of theoretical knowledge and sound practical skills in relation to fitness testing in sport. Ideally, the candidate will work through the Unit, applying the principles and knowledge gained to a case study of their own sport/event.

Outcome 1:

Benefits: Identify strengths and weaknesses; constructing fitness profiles; Designing fitness training programmes; goal setting; evaluation of training programme effectiveness; assess improvements in individuals fitness; benchmark fitness data for use during injury rehabilitation.

Validity: Face validity; Criterion Validity; Construct Validity.

Reliability: Definition; factors influencing reliability – Performers (age; time of day; temperature; skill; knowledge; previous training; nutritional status; familiarity); Test Administration (warm up; adherence to testing protocols; order of tests; surface) Calibration of measuring equipment.

Objectivity: Definition; clear testing protocols; strict adherence to protocols and scoring criteria.

Identify Health Screening Procedures: Purpose; essential elements; examples (Par-Q etc); referral guidelines; signing and dating of form; Body Composition (Bioelectrical Impedance; skinfold thickness protocols; BMI; hydrostatic weighing); other screening procedures if applicable (Blood pressure; resting HR; lung function; anthropometric measurements).

Outcome 2:

Pre-test preparation: Checklist re. Pre-test preparation; equipment; testing session requirements.

Choice of Tests: Power (Vertical Jump; standing long jump; standing triple jump; force plate data) Flexibility (Hamstring extension; modified sit and reach; Thomas test; use of goniometry in flexibility testing); Strength (1-3 Repetition Maximum; isokinetic tests; dynamometer tests); Anaerobic Endurance (Line drill; Jam test; repeated sprint test; phosphate decrement test); Aerobic endurance (Multi-stage fitness test; Cooper 12 minute run test; Yo Yo test; Chester Step test; Harvard step test; Direct VO² Max. tests; OBLA/Maximal Lactate Steady State test); Speed and agility (15-40m Sprint; 'T' Test; Agility tests).

Apply Health Screening: Purpose; essential elements; examples (Par-Q etc); referral guidelines; signing and dating of form; Body Composition (Bioelectrical Impedance; skinfold thickness protocols; BMI; hydrostatic weighing); other screening procedures if applicable

(Blood pressure; resting HR; lung function; anthropometric measurements). *Informed consent*. Purpose; essential elements; examples; signing and dating of form

Higher National Unit specification: support notes (cont)

Unit title: Fitness Testing for Sport

Application of testing protocols: Adherence to standard testing protocols; adherence to scoring procedures; correct demonstrations and instructions of test protocols; effective communication with client.

Recording of results: Pre-prepared form; accurate recording of results.

Outcome 3:

Analysis and Interpretation: Norm tables for specific sports populations; group averages; previous test results.

Written Feedback: Accuracy of information; clear layout of results; appropriate comments relating to test results.

Guidelines: Suggested fitness goals; general fitness training recommendations.

Guidance on the delivery and assessment of this Unit

This Unit would be best delivered during the first year of the HND programme, and should ideally be sequenced after candidates have completed the following 2 Units: Principles of Training; Anatomy, Physiology and Energy Systems.

Open learning

Open learning implies that, while candidates study out with the centres using materials provided, it would be necessary to attend the centre for assessment purposes. For further information of Open and Distance Learning, please refer to the SQA publication, Assessment and Quality Assurance of Open and Distance Learning (SQA 2000).

Special needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (SQA, 2001).

General information for candidates

Unit title: Fitness Testing for Sport

Fitness testing is invaluable in the design of individualised, sport-specific fitness training programmes. In this unit you will investigate the important issues relating to the choice and application of fitness tests for different components of fitness. You will also investigate a range of tests for each of the components of fitness. Finally, you will examine the key issues relating to the analysis of fitness test results, and evaluate methods of providing written feedback to athletes.

Assessment for this unit will take the form of: A restricted response assessment on the key issues in fitness testing and test selection; a practical assessment where you will be required to carry out all pre-testing procedures and apply tests for different components of fitness. You will also have to submit an evidence portfolio in relation to this practical assessment, which contains all relevant documents. Your ability to interpret fitness test results and provide accurate feedback to athletes will be assessed by means of a written project.

Bibliography:

- Beachle TR; Earle RW (2000) Essentials of Strength Training & Conditioning, Human Kinetics; Champaign Illinois.
- Heyward VH (1996) Advanced Fitness Assessment and Exercise Prescription. Human Kinetics; Champaign Illinois.
- Olds T & Norton K (1996) Pre-Exercise Health screening Guide Human Kinetics; Champaign Illinois.
- Roitman J (2001) ACSM's Resource Manual for Guidelines For Exercise Testing and Prescription Lippincott Williams and Wilkins, US.
- SportsCoachUK Measuring Performance – A guide to Field Based Fitness Testing.
Wilmore JH & Costill, DL (1999) Physiology of Sport & Exercise; Human