



Higher National Unit specification

General information for centres

Unit title: Professional Golf: Equipment Technology

Unit code: F3CJ 34

Unit purpose: This Unit is designed to introduce candidates to aspects of golf club repair in a workshop environment. It will give them the underpinning knowledge of the golf club construction process which can influence performance. The Unit also gives candidates the opportunity to gain practical experience in repairing golf clubs.

On completion of the Unit the candidate should be able to:

- 1 Explain the tools and equipment needed to undertake club repair and their usage in a workshop environment.
- 2 Describe the constructions and designs of the golf club grip, head and shaft and their effect on performance.
- 3 Carry out basic club repairs.

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

**SCQF credit 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 SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit is at the discretion of the centre. This is a highly specialised Unit with no link to other NC units.

Core Skills: There are opportunities to develop the Core Skills of *Communication, Working with Others, Information Technology* and *Problem Solving* at SCQF level 5 and *Numeracy* at SCQF level 4 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: Outcome 1 could be assessed by a practical task involving the identification of tools and supporting questions. Outcome 2 could be assessed by producing a portfolio of evidence. Outcome 3 could be assessed by a practical demonstration of golf club repairs.

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

Explain the tools and equipment needed to undertake club repair and their usage in a workshop environment

Knowledge and/or Skills

- ◆ Club repair process
- ◆ Health and safety issues and legislation
- ◆ Machinery
- ◆ Electrical tools
- ◆ Basic tools
- ◆ Specific tools
- ◆ Oils
- ◆ Adhesives
- ◆ Materials

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ explain the purpose of a minimum of 10 tools needed in the workshop
- ◆ describe key health and safety issues in relation to the workshop and public/employee liability issues
- ◆ explain club repair processes and procedures

Assessment Guidelines

This Outcome could be assessed by a combination of identification of tools and questions that cover all aspects of the Knowledge and/or Skills section.

An assessment checklist could be used to allow the candidate to:

- ◆ identify a minimum of 10 tools needed in the workshop
- ◆ describe the purpose of these tools in the workshop
- ◆ explain the club repair processes and procedures

Higher National Unit specification: statement of standards (cont)

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Short answer questions could be used to assess the key Health and Safety issues and legislation in a workshop environment

Candidates are required to clearly identify, explain and produce responses that comprehensively demonstrate their understanding.

Outcome 2

Describe the constructions and designs of the golf club grip, head and shaft and their effect on performance

Knowledge and/or Skills

- ◆ Grip: materials; design; construction
- ◆ Head: materials; design; construction
- ◆ Shaft: materials; design; construction
- ◆ Impact on performance

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ demonstrate an understanding of golf club grips and how this can be appropriately matched to a golfer's preference by use of individual analysis
- ◆ describe a minimum of two materials for grip, head and shaft design
- ◆ describe how the grip, head and shaft are constructed together to produce an effective club
- ◆ describe how the club may be assembled for golfers of differing ability and size relating to hand size, club head release

Evidence should be presented in a portfolio that includes information on grip, head and shaft materials and how they combine to make the modern golf club.

The information gathered should provide evidence that the candidate has an introductory level of understanding of the key issues concerning the construction of a golf club, the materials used and the requirement to match these elements to the needs of the golfer.

Assessment Guidelines

The instrument of assessment could be a combination of an expanded practical checklist, portfolio, questioning and responses that covers the Knowledge and/or Skills.

Higher National Unit specification: statement of standards (cont)

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Outcome 3

Carry out basic club repairs

Knowledge and/or Skills

- ◆ Golf grip alterations
- ◆ Club head repairs
- ◆ Golf shaft repairs
- ◆ Golf club repair process

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ remove, fit and build up two golf grips for varying hand sizes
- ◆ remove and fit two golf club heads
- ◆ remove and fit two golf shafts
- ◆ prepare, deliver and evaluate two basic golf club repairs and identify use of varying materials throughout the club repair process

Evidence will be generated through practical exercises. Candidates should produce evidence that encompasses the planning, preparing and evaluating stages of two basic golf club repairs.

Assessment Guidelines

Assessment checklists could be used to assess the removal and fitting of golf club grips, heads and shafts.

Time allocation for each repair is strongly recommended to be a maximum duration of 90 minutes.

Administrative Information

Unit code: F3CJ 34

Unit title: Professional Golf: Equipment Technology

Superclass category: MG

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Version	Description of change	Date

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Higher National Unit specification: support notes

Unit title: Professional Golf: Equipment Technology

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 is primarily designed to provide candidates with the knowledge and skills to re-grip and repair golf clubs and to advise golfers, of various abilities, of clubs suitable for their performance level.

Outcome 1

This Outcome is an introduction to the equipment needed to execute successful repairs in workshop and the health issues and legislation related to this:

Safety Equipment: Goggles, glasses, heat resistant gloves, overalls

Machinery: Loft and Lie machine, swing weight balance, shaft extractor and graphite shaft remover, electric grinding wheel, Loft and Lie scales

Electrical: Electric drill complete — variable speed, bits (3 mm, 8 mm and 9 mm), bending tools

Basic Tools: Hammer; hide or rubber mallet; hacksaw (Junior); Stanley knife (or similar); tube cutter; pliers and long nose pliers; screw drivers — Phillips and blade, medium and small; scales; vice (Engineers); blowtorch; hand drill; grip gun (pump action); hot air gun; files (various); rubber vice clamps; ruler (long enough to measure shafts)

Specific Tools: 20° Countersink; ferrule installing tool or similar handmade block; selection of shafts; grips and ferrules; grip removing rod

Oils/Adhesives: Penetrating oils; 3 in1 oils, adhesives; grip solution (not white spirit)

Materials: Soft pads (for securing metal wood heads in the vice); sandpaper (various grades); emery cloth (various grades); grip tape; masking tape and thickening tape; 000 grade wire wool; 15 mm dowelling and/or shaft extension pieces; heat decolourising products; oil, grease and grime removers

This list is not exhaustive and centres should ensure that new materials, tools and machinery should be included in delivery as they become available.

Outcome 2

This Outcome is an introduction to the materials necessary for club repair and designs and the methods undertaken to fulfil the process.

Grip material: made of ethylene propylene diene monomer and polyurethane wraps, like the Eaton Whisper/Compression moulded (cord)/Injection moulded (high volume)

Shaft material: generally steel or graphite/carbon fibre shaft behaviour relative to standard of player

Higher National Unit specification: support notes (cont)

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Club head design: (irons) cavity backs, blades /hybrid clubs (woods)

Shaft Flex: The measure of a shaft's flexibility. This measure is relative and varies among manufacturers. Most commonly referred to in terms of **regular, stiff, senior** or **ladies**

Flex Point: The point over the length of where it is designed to bend

Length and Weight: In accordance with R&A standards

Coefficient of Restitution: (CoR) in drivers

Outcome 3

The Outcome is an introduction to the practical skills necessary to repair and construct golf clubs and focuses on the repair/construction process. The process should have three phases, preparation, practical delivery and evaluation of job done.

Preparation

Before candidates can begin the planning and organisation, it is necessary to carry out a knowledge gathering exercise eg equipment, materials, safety precautions.

- ◆ Introductory criteria ie produce evidence of the information found from the knowledge gathering exercise
- ◆ Risk assessment
- ◆ Materials
- ◆ Specification/Order

Delivery

Before candidates are ready for assessment they should have developed their knowledge and practical experience of delivering a session. The assessment will take the form of a practical workshop. The following are suggested areas to cover:

- ◆ clear demonstrations
- ◆ fault correction
- ◆ positioning
- ◆ correct use of equipment
- ◆ safety precautions

Evaluation

To complete the evaluation phase candidates should consider:

- ◆ What was successful about the club repair process?
- ◆ What was unsuccessful about the club repair process?
- ◆ What changes could be made for future repairs?

Higher National Unit specification: support notes (cont)

Unit title: Professional Golf: Equipment Technology

Guidance on the delivery and assessment of this Unit

This Unit is likely to form part of a Group Award designed to provide candidates with knowledge and skills for employment within a golf workshop environment.

This Unit would best be delivered at the start of HNC year or during the first year of an HND programme. Delivery within a lab/workshop set up would be advantageous.

Opportunities for developing Core Skills

There may be opportunities to develop Core Skills throughout this Unit. *Written* and *Oral Communication* skills at SCQF level 6 may be evidenced by the successful completion of the assessment tasks. The production of a portfolio for Outcome 2 will develop written communication skills as the portfolio should be well structured using appropriate language, format and headings. This will also allow development of *IT* skills at SCQF level 6 as candidates could produce a word processed formatted, typed document. Skills of assessing, analysing and evaluating will also be developed through the repair process. There may be opportunities to develop the key elements of *Problem Solving* at SCQF level 6 throughout the delivery of Outcome 3. For example, introducing candidates to the correct preparation, planning and evaluation of basic golf club repair could be accomplished using varying methods such as role playing, group activities or individual tasks. This would allow candidates to justify their chosen strategies and make stronger recommendations as to the correct club repairs during both the demonstration and evaluative stages.

Open learning

Although this Unit could be delivered by distance learning, it would require a considerable degree of planning by the centre to ensure the sufficiency and authenticity of candidate evidence.

It may be possible to deliver parts of this Unit by distance learning. However due to the practical elements involved in delivery and assessment of Outcome 3, attendance at the delivering centre would be recommended.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

General information for candidates

Unit title: Professional Golf: Equipment Technology

This Unit will introduce you to the skills and techniques used by the professional golfer when repairing golf clubs. You will be given underpinning knowledge of the golf club construction process and how this, through various ways, can influence a golfer's performance.

Outcome 1 looks at the purpose and appropriate usage of basic and specific tools required to perform golf club repair, including:

- ◆ safety/electrical equipment and machinery
- ◆ basic and specific tools
- ◆ oils, adhesives, pads, cloths and tape
- ◆ key Health and Safety issues and legislation in a workshop environment

Outcome 2 looks at the various designs, constructions and materials of golf grips, heads and shafts. You will research this area of golf equipment technology and highlight the impact this has upon golfer's performance.

In Outcome 3 you will be asked to carry out basic golf club repairs. Each session will have a maximum 90 minutes and involves you demonstrating the correct procedure concerned with the club repair process. Your ideas as to the correct use of varying materials should be communicated to the assessor involved.

The practical elements of this Unit will be assessed in a professional golfer's workshop setting.