



National Unit Specification: general information

UNIT Golf Course Maintenance (SCQF level 5)

CODE F6TR 11

SUMMARY

This Unit is designed to enable the candidate to acquire the basic practical skills and knowledge required to maintain and renovate a golf course.

This Unit is aimed at candidates wishing to pursue a career in the greenkeeping and sportsturf industries.

OUTCOMES

- 1 Identify and describe a range of equipment, machinery, materials and products used in the maintenance and renovation of a golf course.
- 2 Use and operate a range of resources to assist in the maintenance and renovation of a golf course in accordance with current health and safety requirements.
- 3 Identify and describe a range of common golf course turf problems and how these problems and their effects can be reduced or controlled.
- 4 Prepare a basic annual maintenance and renovation programme for a golf course.

RECOMMENDED ENTRY

Entry is at the discretion of the centre.

CREDIT VALUE

1.5 credits at SCQF level 5 (9 SCQF credit points at SCQF level 5*).

**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.*

Administrative Information

Superclass: SF

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CORE SKILLS

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill	None
Core Skill component	Critical Thinking at SCQF Level 5 Planning and Organising at SCQF Level 5

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit Specification.

National Unit Specification: statement of standards (cont)

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

OUTCOME 1

Identify and describe a range of equipment, machinery, materials and products used in the maintenance and renovation of a golf course.

Performance Criteria

- (a) Identify and describe correctly types of equipment and machinery for mowing.
- (b) Describe correctly the uses and potential misuses of equipment and machinery used for mowing.
- (c) Identify and describe correctly equipment, machinery and materials used in the maintenance and renovation of a golf course.
- (d) Describe correctly the uses and potential misuses of equipment, machinery and materials used in the maintenance and renovation of a golf course.
- (e) Describe correctly methods of checking, setting up and operating/using a range of equipment, machinery and materials correctly and safely.

OUTCOME 2

Use and operate a range of resources to assist in the maintenance and renovation of a golf course in accordance with current health and safety requirements.

Performance Criteria

- (a) Select, prepare, calibrate and use equipment correctly.
- (b) Select, prepare, calibrate and operate machinery correctly.
- (c) Select, calculate and use appropriate materials correctly.
- (d) The upkeep, aftercare and storage of equipment, machinery and materials are carried out correctly.

OUTCOME 3

Identify and describe a range of common golf course turf problems and how these problems and their effects can be reduced or controlled.

Performance Criteria

- (a) Identify correctly a variety of common golf course turf problems.
- (b) State correctly the symptoms, causal factors and effects of a variety of common golf course turf problems.
- (c) Describe accurately the methods and means for controlling a variety of common golf course turf problems.
- (d) Describe correctly the safe use and storage of pest control materials used to treat golf course turf problems.

National Unit Specification: statement of standards (cont)

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OUTCOME 4

Prepare a basic annual maintenance and renovation programme for a golf course.

Performance Criteria

- (a) Prepare accurately a basic maintenance and renovation programme to cover essential operations.
- (b) Indicate accurately the appropriate sequence, timing and frequency for each of the main operations.
- (c) List the essential equipment, machinery and materials required to carry out the basic programme of maintenance and renovation.
- (d) Indicate correctly presentational methods and techniques used to prepare the golf course for play.

EVIDENCE REQUIREMENTS FOR THIS UNIT

Written and/or recorded oral evidence produced under open-book conditions, product evidence and performance evidence supplemented with an assessor observer checklist is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria.

It is understood that all relevant operational procedures undertaken in this Unit will follow current legislation, including health and safety, regulations, codes of practice and manufacturers' recommendations where appropriate.

Outcome 1 — Written and/or recorded oral evidence

The candidate must provide written and/or oral evidence for the different types and uses of equipment, machinery and materials used to assist in the maintenance and renovation of a golf course and in line with the tasks listed below for Outcome 2.

Outcome 2 — Performance Evidence supplemented with an assessor observer checklist

The candidate must, after due briefing, use a basic range of equipment, machinery and materials in the maintenance and renovation of a golf course.

The candidate will carry out the following tasks:

- ◆ Switching and brushing
- ◆ Hole changing, pin positioning and placement
- ◆ Edging and raking a bunker
- ◆ Moving and positioning tee markers and other relevant golf course furniture
- ◆ Mowing greens, tees and approaches
- ◆ Fairways, banks and rough areas
- ◆ Top dressing a fine turf or newly renovated area
- ◆ Aerating (surface and sub-surface)
- ◆ Feeding

National Unit Specification: statement of standards (cont)

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- ◆ Watering
- ◆ Controlling or reducing turf problems
- ◆ Repairing or renovating a fine turf area
- ◆ Rolling
- ◆ Marking out and/or defining specific areas (eg Ground Under Repair, Drop Zone, Water Hazards, distance markers, Out of Bounds)

Outcome 3 — Written and/or recorded oral evidence

The candidate must identify a range of turf problems and explain how to control and/or minimise the problems by means of ID tests using in situ examples or prepared samples and/or photographic representations and by a series of extended response questions.

For Performance Criterion (a) the candidate must identify a minimum of 20 common turf problems (pests, weeds, diseases and disorders) as follows:

- ◆ A minimum of four turf pests
- ◆ A minimum of four turf diseases
- ◆ A minimum of 10 turf weeds
- ◆ A minimum of two other disorders (eg algal slime, dog lichen)

For Performance Criterion (b) the candidate must recognise a minimum of five symptoms and/or effects of a range of pests, weeds, diseases and disorders of golf course turf as follows:

- ◆ A minimum of one turf pests
- ◆ A minimum of one turf diseases
- ◆ A minimum of two on turf weeds
- ◆ A minimum of one on turf disorders

For Performance Criterion (c) the candidate must explain how to reduce or control a minimum of five pests, weeds, diseases and disorders culturally, chemically and biologically (if appropriate). Candidates must describe how to safely use and store systemic and non-systemic substances used in pest control.

Outcome 4 — Product evidence

Candidates will produce an annual maintenance and renovation plan for a golf course which details essential tasks, machinery, equipment, materials, seasonality, timing/sequence of operations and presentational techniques

There is opportunity to integrate the Evidence Requirements and assessment for Outcome 4 with Outcome 1 and certain aspects of Outcome 3.

Centres must be satisfied that the evidence submitted is the work of individual candidates.

When using Performance Evidence, assessor observation checklists and other assessment records should be maintained and kept up to date to keep track of candidate progress and to provide evidence for internal and external verification purposes.

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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 60 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This Unit is a mandatory Unit in the National Certificate in Greenkeeping, but may also be taken as a free-standing Unit

This Unit is aligned to the following Lantra, Sector Skills Council's National Occupational Standard (NOS) Units:

- ◆ (CU2) Monitor and Maintain Health and Safety
- ◆ (CU5) Develop personal performance and maintain working relationships
- ◆ (CU11) Prepare and operate a tractor with attachments
- ◆ (L27) Use and maintain equipment and machines
- ◆ (L6) Present, maintain and repair sportsturf surfaces for play
- ◆ (L5) Maintain the Health of Sportsturf

Outcome 1

This Outcome introduces the candidate to the range and diversity of equipment, machinery and materials used in the maintenance and renovation of a golf course. The candidate will be introduced to the correct and safe methods of checking, setting-up and operating of equipment and machinery and to potential misuses.

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Outcome 2

The candidate will be provided with the opportunity, after initial briefing, demonstration and practice to operate and use a range of equipment, machinery and materials to assist in the maintenance of a golf course.

The candidate will perform the following tasks:

- ◆ Switching and brushing
- ◆ Hole changing/ pin position and placement
- ◆ Edging and raking a bunker
- ◆ Moving/positioning tee markers and other relevant golf course furniture
- ◆ Mowing banks, greens, tees/approaches, fairways and rough areas
- ◆ Topdressing a fine turf or newly renovated area
- ◆ Aerating (surface and sub-surface)
- ◆ Feeding
- ◆ Watering
- ◆ Controlling/reducing turf problems
- ◆ Repairing or renovating a fine turf area
- ◆ Rolling marking out/defining specific areas (eg Ground Under Repair (GUR), Out of Bounds (OB), Water Hazards, Drop Zone and distance markers)

Outcome 3

This Outcome introduces the candidate to the range of pests, weeds, diseases and disorders which have an effect on the quality of the golf course turf. It also introduces the candidate to the cultural, biological and chemical methods by which these problems can be controlled or reduced. Candidates will discover how to adopt a considered, proactive, integrative and sustainable approach to solving these problems after positive identification of symptoms and conditions which can bring them about.

Outcome 4

For this Outcome it is anticipated that the candidate will be able to use the knowledge and skills gathered from the previous three Outcomes to produce a basic annual maintenance and renovation programme for a golf course which details essential tasks, machinery, equipment, materials, seasonality, timing/sequence of operations and presentational techniques. In doing this, the candidate will acquire an overall appreciation of the many factors which play a part in producing quality turf surfaces for playing the game of golf.

There is scope in Outcome 4 to integrate some of the assessments covered in parts of Outcome 1 and Outcome 3

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GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

This Unit lends itself to a holistic and integrative approach to teaching and learning,

A structured, logical approach which considers seasonality, timing and scale of operations will prove beneficial to the candidate.

Much of the knowledge may be delivered, checked and reinforced in the practical situation. Therefore, optimum use should be made of real practical resources backed up by up-to-date information from a range of sources (on-line, textbooks, videos, CDs, slides, samples, journals, magazines, leaflets, suppliers of machinery, equipment and materials etc.) to bring this Unit to life for the candidate.

Where appropriate and when time allows, visits to a golf course or talks from various practitioners will be helpful to the candidate.

Any extra work placement or work experience acquired by the candidate will also be helpful in adding to his/her skills/knowledge base.

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

In this Unit candidates may have the opportunity to develop aspects of the following Core Skills:

- ◆ Communication (SCQF level 4) within Outcome 4
- ◆ Using Information Technology (SCQF level 4)
- ◆ Problem Solving (SCQF level 4) within Outcome 3
- ◆ Numeracy (SCQF level 4)

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

There is scope in this Unit to follow an integrative and varied approach to assessment, especially when undertaking Outcome 4 which may be used to test and record knowledge acquired in other Outcomes. Outcome 4 should be seen as an opportunity to bring together all the knowledge and skills gained by the candidate while undertaking the first three Outcomes of this Unit.

Similarly, practical assessments, supported by Assessor Observer Checklists undertaken in Outcome 2 can be used for candidates to apply knowledge gained from Outcome 1 and while carrying out tasks requiring use and operation of equipment, machinery and materials (eg top dressing a fine turf area) or requiring use of equipment and materials (eg pedestrian feeding of a fine turf area) or requiring use of equipment and machinery (eg switching a green before and after mowing). There are other examples and assessors should endeavour to set up practical assessments of this type following current national occupational standards once candidates have received sufficient training and practice. Clear practical observational checklists will need to be produced setting out the required standards to be met by the candidate on each of the tasks.

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Outcome 1 should be approached with a view to giving candidates a detailed and comprehensive overview of the equipment, machinery and materials used by the greenkeeping profession. Identification tests (written and /or oral) can be combined with a range of assessment instruments, including oral questions, extended response questions, structured questions.

Outcome 3 should be approached with a view to introducing the candidate visually and conceptually to the range of turf problems affecting golf course turf quality and to an integrated way of reducing and controlling the problems. Identification tests either in the field or in a classroom for Performance Criterion (a) will test the candidate's ability to recognise a range of problems. Performance Criteria (b) and (c) may be assessed by employing short answer questions, extended response questions, matching exercises or a mini project/assignment.

Assessor observation checklists and other assessment records should be maintained and kept up to date to keep track of candidate progress and to provide evidence for internal and external verification purposes.

If re-assessment is required, the centre must provide a sampling from a range of content within the Outcome.

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

DISABLED CANDIDATES AND/OR THOSE WITH ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements