

SQA Advanced unit specification

General information for centres

Unit title: Golf Course Management: Managing International Turfgrasses

Unit code: HW86 48

Unit purpose: This unit is designed to enable candidates to demonstrate an understanding of the principles and practices involved in maintaining and managing turfgrasses on golf courses abroad, and to apply this knowledge by devising a turfgrass management programme.

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

- 1 Describe and identify the main turfgrasses used on golf courses internationally.
- 2 Describe the main weeds, pests, non-pathogenic disorders and problems on international grasses including prevention and control strategies.
- 3 Devise a two year turfgrass management programme for a given international situation.

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

**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 National 1 to Doctorates.*

Recommended prior knowledge and skills: Candidates should preferably achieved the following:

SQA Advanced Certificate Unit: *Management of Turf Areas on Golf Courses*

Core Skills: There are opportunities to develop the Core Skills of *Problem Solving*, *Communication* and *IT* at SCQF level 6 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: This unit is assessed by three instruments of assessment. All three however may be assessed jointly by a Report. This single instrument of assessment would require the candidates to produce a report based on a case study or vocationally relevant golf course management scenario.

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SQA Advanced 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 and identify the main turfgrasses used on golf courses internationally

Knowledge and/or Skills

- ◆ International turfgrass characteristics
- ◆ Plant identification
- ◆ Mown and unmown turfgrass states

Evidence Requirements

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

- ◆ identify at least five grass species both at mown and unmown states
- ◆ describe a range of characteristics of turfgrasses

Assessment Guidelines

The assessment of this Outcome can be combined with Outcomes 2 and 3 as part of single assessment for this unit, details which are included in the Guidance for Delivery and Assessment. Alternatively, it can be assessed with the production of a written portfolio of evidence demonstrating the candidates understanding.

Outcome 2

Describe the main weeds, pests, non-pathogenic disorders and problems on international grasses including prevention and control strategies

Knowledge and/or Skills

- ◆ Soil and root insects
- ◆ Leaf and stem feeders
- ◆ Piercing/juice extracting insects
- ◆ Fungal diseases
- ◆ Weeds relating to international situations

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Evidence Requirements

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

- ◆ describe the symptoms of at least three of each turf pests, diseases and weeds
- ◆ select the appropriate recommended prevention and control of measures for at least three of each turf pest, diseases and weeds

Assessment Guidelines

The assessment of this Outcome can be combined with Outcomes 1 and 3 as part of single assessment for this unit, details which are included in the Guidance for Delivery and Assessment. Alternatively, it can be assessed with the production of a written portfolio of evidence demonstrating the candidates understanding.

Outcome 3

Devise a two year turfgrass management program for a given international situation

Knowledge and/or Skills

- ◆ Environmental issues of the main turfgrasses used on golf courses abroad
- ◆ Water management practices employed abroad
- ◆ The nutritional requirements of the main turfgrasses used on golf courses abroad

Evidence Requirements

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

- ◆ describe and evaluate the management techniques and practice which can influence the growth, quality and presentation of the main turfgrasses used abroad
- ◆ describe turf maintenance renovation practices, including mowing, nutrition and aeration, course presentation
- ◆ describe preparation including tees, fairways, semi-rough and greens; climatic conditions affecting turf quality including cool and warm humid environments; soil conditions affecting turf quality

Assessment Guidelines

Production of an assignment of minimum 1,500 words demonstrating candidates' ability to fulfil the above. This Outcome may be assessed alone or may be combined with the assessment for Outcomes 1 and 2, and in such a case would assess the whole unit holistically. In such a situation care should be taken to ensure that for each Outcome turf management quality standards, greenkeeping practice, and turf evaluation skills are assessed.

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Administrative Information

Unit code:	HW86 48
Unit title:	Golf Course Management: Managing International Turfgrasses
Superclass category:	SF
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Version	Description of change	Date

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SQA Advanced unit specification: support notes

Unit title: Golf Course Management: Managing International Turfgrasses

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 provides background knowledge and information for the professional turf manager who is interested in managing turfgrasses on golf courses abroad.

The unit primarily intends to develop candidate skills in the correct identification of environmental factors influencing turf quality, greenkeeping techniques used to manage turfgrasses used abroad, leading onto the ability to make recommendations for turf improvement. Candidates should be encouraged to develop management skills by being exposed to a wide range of material relevant to the Group Award.

Emphasis may be placed on specimens or problems specific to distinct geographic regions, problems of national or international significance should not be ignored. Lectures and tutorials should be supported by guest speakers, resource materials and the use of IT and VLE to develop skills and knowledge.

The following texts or current equivalents are appropriate for the unit:

Turgeon A 1980 *Turfgrass Management* — Prentice Hall
Beard J 1973 *Turfgrass Science & Culture* — Prentice Hall
Beard J 1998 *Turf Management for Golf Courses* — Ann Arbor Press
Emmons 2000 *Turfgrass Science & Management* — Delmar
Perris Evans 1996 *Care of the Golf Course* — STRI
McCarty Miller 2002 *Managing Bermudagrass Turf* — Sleeping Bear Press
McCarty 2001 *Best Golf Course Management Practice* — Prentice Hall

www.agronomy.psu.edu
www.gcsaa.org
www.usga.org/green/index.
www.bigga.co.uk

Guidance on the delivery and assessment of this unit

This unit would best be delivered after, or in conjunction with, the following unit:

HW8A 47 *Soil Science for Turf Managers 1*
HW90 47 *Management of Turf Areas on Golf Courses*

The candidate should demonstrate his ability to select the optimum warm season turfgrass species for the following environmental conditions:

- ◆ establishment rate
- ◆ wear resistance
- ◆ cold tolerance

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- ◆ drought tolerance
- ◆ shade tolerance
- ◆ salt tolerance

Appraise an area of **warm season turf** and its maintenance programme so that you can identify POTENTIAL improvement.

Your appraisal should include the following topic areas:

- ◆ describe and appraise the current condition of the golf course turf
- ◆ a comprehensive critique of the maintenance programme

The appraisal should be in REPORT form to the Greens Committee of the golf club. You are a new Head Greenkeeper/Course Manager and the report is the first task you have undertaken for the Committee.

Formulate an improvement programme for the same golf course.

Your programme should be accurate in the following areas:

- ◆ recommendations should be comprehensive and ensure improved turf quality and presentation
- ◆ timing and frequency of operation

This unit will normally be delivered as part of the group award — SQA Advanced Diploma in Golf Course Management. As part of a group award it would be beneficial for it to be delivered after or in conjunction with complimentary units eg Turfgrass Ecology, Design and construction of golf course features etc. In these circumstances candidates will more easily appreciate the integration of material. This should allow the unit to be delivered in a way that enables candidates to appreciate its relevance to the occupational area concerned.

It can also be delivered as a free-standing unit, usually for purposes of continuing professional development.

Opportunities for developing Core Skills

There are opportunities to develop the Core Skills of *Problem Solving*, *Communication* and *IT* at SCQF level 6 in this unit, although there is no automatic certification of Core Skills or Core Skills components.

Open learning

This unit could be delivered by distance learning. It is probable that candidates would need to attend the centre for assessment of Outcome 1, though this could be done in other locations under approved supervision. Where assessment is by distance learning it is recommended that a single assessment for Outcomes 1, 2 and 3 is delivered relating to the candidate's workplace experience. Authenticated evidence such as photographs, plans and other visual aids would be required from the candidate's place of work.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners will be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

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General information for candidates

Unit title: Golf Course Management: Managing International Turfgrasses

This unit develops your knowledge and skills required to successfully maintain and manage turfgrasses on golf courses abroad.

You will study the problems facing the turf manager in the warm season zones, and by relating these environmental issues to other units you have studied you will develop some of the research and investigative skills that are important in the field.

On completion of the unit you should be able to:

- 1 Describe and identify the main turfgrasses used on golf courses abroad.
- 2 Describe the main weeds, pests, non-pathogenic disorders and problems on international grasses.
- 3 Devise a two year turfgrass management program for a given international situation.

Assessment 1 and 2 are assessed jointly by one written assessment (open-book, using self-made notes only) covering both Outcomes in the form of a report. As part of this report you will be asked to complete a brief identification exercise of the five major turfgrass species used in the warm season zone.

Assessment 3 is report-based and will be more useful to you where, as much as possible, relates the course content to an actual practical situation on a golf course and not purely hypothetical examples. You will describe the environmental issues in the warm season zone for a golf course of your own choosing. You will formulate a management program that ensures optimum health and playing conditions for the golf course including a thorough description of the cultural practices, including irrigation and nutrition, and chemical practices applied over a two year period. This assessment should be completed in standard report format and not exceed 750 words.