



Real Federación Española de Golf
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GREEN SECTION RFEG INFORME MENSUAL

Asunto

**HNC Golf Course Management
Elmwood College**

Septiembre, 2015

Presentes: D. Eloy Barranco, Técnico en Prácticas RFEG



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PRESENTACIÓN BLOQUE 1 (31-08-15 / 16-11-15)

LUNES	MARTES	MIÉRCOLES	JUEVES	VIERNES
Proposed Industry Related Practical Session	Turf Grass Ecology	Management of Turf Areas	Soil Science for Turf	Proposed Industry Related Practical Session
	Desing & Construction	Using Software Packages	Golf Course Irrigation	

Horario: 09:00 - 12:00 & 13:00 - 16:00

Profesores y asignaturas:

- Paul Miller: Management of turf areas, Desing & Construction and Soil Science.
- Alan Clark: Turf grass ecology and Irrigation system.
- Colin Gilmour: Using software.

Todas las semanas se realizan viajes a diferentes campos de golf, con los profesores de cada asignatura, y te explican la teoría in situ.

Existe una plataforma moodle, donde los profesores cuelgan los apuntes, ejercicios y bibliografía.

A continuación, se realizará un esquema de la materia explicada (durante el primer mes) de cada asignatura y los ejercicios que se están realizando (Assessment). No hay exámenes, sólo evaluación continua.

TURF GRASS ECOLOGY:

TOPIC 1: Introduction to ecological concepts.

- Definitions in ecology: Ecosystem, habitat, turfgrass natural habitat, rhizosphere, community, population, niche (fundamental and realised niche), overlapping niches...
- Turfgrasses Resources (space, light, oxygen, water, nutrition) Resources and the turfgrass manager.
- Turfgrass Habitat: Chewing's Fescue, Browntop Bent, Creeping bent, Annual Meadowgrass, Smooth stalked Meadowgrass, Perennial ryegrass...
- Links versus Parkland Ecosystems.

TOPIC 2: Turfgrass Interactions: Competition, Niches and Strategies for survival.

TOPIC 3: Turfgrasses; Their anatomy, physiology and ecological adaptations.

Assessment:

1)Examine the fundamental concepts of ecology in the context of a turf grass ecosystem using a range of ecological terms that are specific to turfgrasses.

To include:

- Identification of resources eg light, water, space, nutrients and oxygen.
- Ecosystem; biosphere; rhizosphere; biotic and abiotic components;
- The concept of 'niche' and the niche of a range of turf grass sp.
- Overlapping niches and therefore competition for resources.
- Competition for resources by turf grasses and other organisms.

2) Explain turf grass physiological and morphological adaptations with reference to a range of environmental conditions.

To include:

- The anatomical features/component parts of turfgrasses and their role in helping grasses adapt to a range of environments.
- Describe the physiological processes in both warm and cool season turf grasses.
- Describe the particular morphology/structure of the turf grass plant under mown and unmown conditions.
- The physiological and morphological adaptations of a range of turf grass species including warm and cool season grasses.
- Explain how turf grasses have adapted their morphology and physiology to suit their growing environment.



Visita Elmwood Golf club.



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Visita Old Course of St. Andrews

Bibliografía:

Turfgrass Ecology&Management. - T. Karl Danneberger.
STRI Disturbance Theory - H. Bechelet.

SOIL SCIENCE OF TURF:

- Soils of Different Golf Courses, and where they come from: A historical overview.
- Land Capability for Agriculture: The Links Environment.
- Links, Parkland, Heathland, Moorland and others: Deposition of Parent Materials, Soil Formation Process...



Elie links- site visit.

Se realizaron muestras de suelo desde la playa hasta el campo para comprobar la evolución y los diferentes horizontes del suelo.



Ejemplo de una muestra.

Assessment:

For successful completion of this outcome you need to prepare a report on the soils for a minimum of two golf courses.

In this first outcome you have to show that you understand the ideas of Land Capability for Agriculture and how they apply to two golf courses that you know of. Remember, Land Use Capability is about the potential of land to be used for agricultural production. So you need to describe two golf course sites with reference to those concepts. This could be done by expressing your thoughts about the following points:

What is the geographic location and topography of the golf course?

This can include a description of how far north or south it is, its altitude, whether the land is flat or hilly, whether it is north or south facing, whether it is on the flood plain of a river, the climate as a consequence of its location, and any further details that you think are relevant. You could illustrate this with a map, photographs or other media.

What is the nature of the soil?

Is the soil sandy, chalky, heavy, peaty or what? What is the parent material? What evidence do you have for saying this? How do you think it was deposited?

What is its potential for agricultural use?

What are the limitations of the site? Are these related to the landscape, the climate, the soils or what? What practical difficulties do these limitations present in a Greenkeeping context? What are your major considerations relating to the landscape and soils in terms of producing good quality fine turf? What practical methods do you use to overcome these difficulties?

Bibliografía:

Turfgrass Soil Fertility and Chemical Problems. - R.N Carrow / D.V Waddington / P.E Rieke.

GOLF COURSE IRRIGATION:

- Irrigation Scheduling: what is it?, Replenishing Soil Water, Evapotranspiration, Irrigation: the art with the science, Crop Factor Allowance(Kc), Water Balance Sheets, Visual Assessment of Turf, Efficient System Records, Irrigation 'window'.

- Soil Water and Rootzone Management: Rootzones v Soils, Soil Water and Rootzone Management (Surface water movement, Moisture Management Equipment), Practical Barriers to Irrigation (Compaction, Thatch, Slopes or Gradients, Dry Patch, Evaporation Losses, Wetting Agents), Water Issues (water framework directive, water sources, water quantities, conservation, water quality issues), Control systems and water conservation (conservation, control systems and weather stations, Soil Moisture Monitoring and Conservation).

- R & A Conservation/Sustainability link.

<http://golfcoursemanagement.randa.org/en/Features/2012/03/Using-Water-Wisely.aspx>

- Golf course water use.

WEB resources:

<http://www.scotland.gov.uk/Publications/2006/03/22145430/2>

http://www.sepa.org.uk/water/water_regulation.aspx

<http://www.ext.colostate.edu/pubs/crops/04707.html> (Irrigation Scheduling)

<http://www.randa.org/en/TheGolfCourse/Social-Responsibility/Water-Management.aspx>

www.bgs.ac.uk

www.defra.gov.uk

<http://www.randa.org/en/TheGolfCourse/Social-Responsibility/Water-Management.aspx>

Assessment:

For this part of the unit you are required to produce a written report covering the following topics.

a) Explain how environmental factors influence the operation of a golf course irrigation system

b) Describe the influence of water sources and their legal framework have on golf course irrigation system usage.

Submit work under the following headings:

Rootzone/Soil type - influence on soil water movement/availability

Irrigation Scheduling – ET and soil moisture monitoring methods

Irrigation methods/practices and problems
Water sources – types, pros and cons of these
Legislation/Licensing for water abstraction/protection
Water conservation methods and sustainability
Water quality problems in irrigation



Estación de bombeo de Elmwood Golf Club.

Bibliografía:

Golf Course Irrigation System Desing and Drainage - Edward Pina.
Golf Course Irrigation.

MANAGMENT OF TURF AREAS:

Sólo se ha tenido una clase teórica y otra práctica.
Turf Quality (What do we mean?- Variability in Golf Courses).
Se visitaron los siguientes campos:
St. Andrews Links Jubilee, St. Andrews Links Old and New.

USING SOFTWARE:

Se utiliza esta clase para practicar con Excel, Powerpoint y Word.
Tenemos que hacer un anteproyecto de la construcción de un Green completo.



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DESING & CONSTRUCTION

- Land, layout, design (How to think about golf courses?, What do we get out of sport?, Play, recreation or sport?, Golfers and their Feelings, [Golf Courses at St Andrews](#)).
- Castle Stuart Golf Links: Castle Stuart Philosophy, The Construction Process, Feedback Time, videos de la construcción completa en la página web).
- Golfing Landscapes: Links Courses.
- Routing and Design Styles.
- Design for Maintenance: Soil Type, Golf Course Design in Relation to Course Maintenance, Course Layout, Course Features (green, tee, bunkers).

Assessment:

Outcome 1: Evaluate course design in the context of design principles for the game of the golf and course management.

You are to write an assignment and make reference to each environment/construction type: park land, links land, heath land and moor land.

You are to define the terms penal, strategic and heroic in relation to design.

You are to appraise an 18 hole golf course with reference to the fundamental design philosophies penal, strategic and heroic, course environment type, course layout, ease of maintenance, length, size, hazards, trees, shrubs and aesthetic appeal.

You will provide evidence to demonstrate your knowledge and/or skills by showing that you can:-

- Identify different types of golf course environments
- Define the design terms penal, strategic and heroic
- Explain the design requirements for ease of maintenance
- Appraise golf course components

You will:

Assessment should comply with a standard report format FONT 12 and should provide a minimum of 1000 words.

The appraisal element should form a written report, conforming to a given format, on a named golf course, describing design-philosophy components, photographs, diagrams and illustrations should be encouraged to enhance the appraisal. The assessment should be conducted under open-book (no restrictions) conditions.



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ALFRED DUNHILL CHAMPIONSHIP 2015

Durante los días 30, 1, 2 y 3 se asistirá de voluntario para ayudar al equipo de Kingsbarns Golf Links.

A continuación, se adjuntan algunas fotos del campo.



Green y Antegreen del 9.



Calle del 17.



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Tees del hoyo 2.



Green del hoyo 1.