

**-SQA- SCOTTISH QUALIFICATIONS AUTHORITY**

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**NATIONAL CERTIFICATE MODULE DESCRIPTOR**

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<b>-Module Number-</b>	<b>1120111</b>	<b>-Session-</b>	<b>1991-92</b>
<b>-Superclass-</b>	<b>RH</b>		

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<b>-Title-</b>	<b>INTRODUCTION TO DEER BIOLOGY (X<sup>1/2</sup>)</b>
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**-DESCRIPTION-**

Purpose	This module introduces the student to the reproductive biology, physiology and behaviour of deer which occur in the United Kingdom. It is designed for the student who wishes to be employed in the field of gamekeeping or stalking.
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The module could be taken concurrently with 1120121 Practical Deer Tasks.

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Preferred Entry Level	No formal entry requirements.
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Outcomes	The student should: <ol style="list-style-type: none"><li>1. identify species of deer occurring in the United Kingdom;</li><li>2. describe the biology of deer in relation to reproduction and behavioural patterns;</li><li>3. identify factors affecting the health of deer.</li></ol>
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Assessment Procedures	Acceptable performance in this module will be satisfactory achievement of all the Performance Criteria specified for each Outcome.
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The following abbreviations are used below:

PC Performance Criteria  
IA Instrument of Assessment

**Note:** The Outcomes and PCs are mandatory and cannot be altered. The IA may be altered by arrangement with SQA. (Where a range of performance is indicated, this should be regarded as an extension of the PCs and is therefore mandatory.)

**OUTCOME 1 IDENTIFY SPECIES OF DEER OCCURRING IN THE UNITED KINGDOM**

PCs (a) The identification of species of deer occurring in the United Kingdom is correct in terms of name and sex.

IA Restricted Response Question

The student will be set an exercise consisting of a restricted response question to test the application of knowledge required to identify species of deer occurring in the United Kingdom.

The exercise will consist of one restricted response question which will require the student to identify 6 species of deer stating their name and sex.

The student will be presented with examples of species of deer which occur in the UK. This may be actual specimens or pictorial representation.

Satisfactory achievement of the Outcome will be based on the student identifying a minimum of 5 deer correctly by name and sex.

**OUTCOME 2 DESCRIBE THE BIOLOGY OF DEER IN RELATION TO REPRODUCTION AND BEHAVIOURAL PATTERNS**

PCs (a) The description of the reproductive biology of deer is correct in terms of:

- (i) age of first breeding;
- (ii) breeding cycles;
- (iii) calving rates;
- (iv) growth rates;
- (v) life span;
- (vi) natural mortality.

(b) The description of behavioural patterns of deer is correct in relation to:

- (i) social groupings;
- (ii) distribution on ranges (summer/winter) and in woodlands;

(iii) the rut and calving.

- (c) The explanation of eating patterns of deer in relation to their behaviour is correct.

**IA Restricted Response Questions**

The student will be set restricted response questions to test the application of knowledge required to describe the biology of deer in relation to reproduction and behavioural patterns.

The exercise will consist of 3 restricted response questions, one for each Performance Criterion.

Satisfactory achievement of the Outcome will be based on all the Performance Criteria being met. This will be demonstrated by the student answering all the questions correctly.

**OUTCOME 3**

**IDENTIFY FACTORS AFFECTING THE HEALTH OF DEER**

PCs

- (a) The identification of common diseases and parasites which affect deer is correct.
- (b) The explanation of the effects of common diseases and parasites is correct in terms of the symptoms they cause and their implications in relation to the carcass.

**IA Restricted Response Questions**

The student will be set restricted response questions to test the application of knowledge required to identify factors affecting the health of deer.

The exercise will consist of 6 restricted response questions which will be allocated as follows:

1. 3 questions on diseases which affect deer;
2. 3 questions on parasites which affect deer.

Each question will be sub-divided as follows:

- (i) identification of the disease/parasite (as appropriate);
- (ii) explanation of the symptoms and the implications on the carcass.

The student should be provided with examples of diseases and parasites which affect deer, the symptoms they cause and implications to the carcass. This could be

in the form of actual specimens or pictorial representation.

Satisfactory achievement of the Outcome will be based on all the Performance Criteria being met. This will be demonstrated by the student producing:

1. correct responses for each part of the question for a minimum of 2 diseases;
2. correct responses for each part of the question for a minimum of 2 parasites.

**The following sections of the descriptor are offered as guidance. They are not mandatory.**

### CONTENT/CONTEXT

Corresponding to Outcomes 1-3:

1. The deer species which occur in the United Kingdom; Red, Sika, Fallow, Roe, Muntjac and Chinese Water Deer. Students should be aware of those most common to Scotland. Differences in size, coat colour and texture, antler form, and behaviour. Students should be familiar with seasonal changes and differences between males and females of each species.
2. Breeding cycles, calving rates, sex ratios, growth rates, longevity, and natural mortality should be considered in the context of stock management of deer.

Red deer are free ranging and are selective in their feeding requirements. Summer ranges on high ground are extensive; winter ranges in glens and low ground are restricted and limit the size of deer herds. Hinds and followers live in family groups which may merge into large herds of females and followers. Stags live in bachelor groups which disperse at the time of rut. Roe, Sika, and Fallow deer are generally associated with woodlands.

The essential features of the habitats favoured by the various species of deer should be examined and used to form the basis of discussions relating to successful management of deer herds.

3. Many parasites are specific to deer and are not transmitted to domestic livestock. The life cycles of the principal deer parasites should be included together with details of the commonly occurring diseases and parasites that may affect deer.

SUGGESTED LEARNING AND TEACHING APPROACHES

Relating to Outcomes 1-3:

1. Deer species and sex should be identified from photographs, antlers, prepared skins, carcass weight data, video film, and in the field if possible.
2. Project work and group discussions centering on the reproductive cycle of the deer species could be used to introduce the student to the varying nutritional needs of deer, both in terms of sex and species.

The seasonal nature of the behaviour of the species of deer could provide a central theme for the individual student folios of work.

3. The use of commercial literature on the treatment of the diseases and parasites commonly found in Scottish deer as a basis for group discussion could provide a means for the achievement of this Outcome.

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