The Further Education and Training Awards Council (FETAC) was set up as a statutory body on 11 June 2001 by the Minister for Education and Science. Under the Qualifications (Education & Training) Act, 1999, FETAC now has responsibility for making awards previously made by NCVA.

Module Descriptor

Veterinary Diagnostic Imaging

Level 6  N32932

www.fetac.ie
# Level 6 Module Descriptor

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<td>Describes context and objectives</td>
</tr>
<tr>
<td><strong>Module Title</strong></td>
<td>Indicates the module content. This title appears on the learner’s certificate. It can be used to download the module from the website <a href="http://www.fetac.ie">www.fetac.ie</a>.</td>
</tr>
<tr>
<td><strong>Module Code</strong></td>
<td>An individual code is assigned to each module</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>Indicates where the award is placed in the National Framework of Qualification, from Level 6 to Level 6</td>
</tr>
<tr>
<td><strong>Credit Value</strong></td>
<td>Denotes the amount of credit that a learner accumulates on achievement of the module.</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>Describes in summary what the learner will achieve on successfully completing the module and in what learning and vocational contexts the module has been developed. Where relevant, it lists what certification will be awarded by other certification agencies.</td>
</tr>
<tr>
<td><strong>Preferred Entry Level</strong></td>
<td>Recommends the level of previous achievement or experience of the learner.</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td>Usually ‘none’ but in some cases detail is provided here of specific learner or course provider requirements. There may also be reference to the minimum safety or skill requirements that learners must achieve prior to assessment.</td>
</tr>
<tr>
<td><strong>General Aims</strong></td>
<td>Describe in 3-5 statements the broad skills and knowledge learners will have achieved on successful completion of the module.</td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td>Structure the learning outcomes; there may be no units.</td>
</tr>
<tr>
<td><strong>Specific Learning Outcomes</strong></td>
<td>Describe in specific terms the knowledge and skills that learners will have achieved on successful completion of the module.</td>
</tr>
<tr>
<td><strong>Portfolio of Assessment</strong></td>
<td>Provides details on how the learning outcomes are to be assessed.</td>
</tr>
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<td><strong>Grading</strong></td>
<td>Provides details of the grading system used.</td>
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<tr>
<td><strong>Individual Candidate Marking Sheets</strong></td>
<td>List the assessment criteria for each assessment technique and the marking system.</td>
</tr>
<tr>
<td><strong>Module Results Summary Sheet</strong></td>
<td>Records the marks for each candidate in each assessment technique and in total. It is an important record for centres of their candidate’s achievements.</td>
</tr>
<tr>
<td><strong>Appendices</strong></td>
<td>Can include approval forms for national governing bodies.</td>
</tr>
<tr>
<td><strong>Glossary of Assessment Techniques</strong></td>
<td>Explains the types of assessment techniques used to assess standards.</td>
</tr>
<tr>
<td><strong>Assessment Principles</strong></td>
<td>Describes the assessment principles that underpin the FETAC (FETAC) approach to assessment.</td>
</tr>
</tbody>
</table>
Introduction

A module is a statement of the standards to be achieved to gain an FETAC award. Candidates are assessed to establish whether they have achieved the required standards. Credit is awarded for each module successfully completed.

The standards in a module are expressed principally in terms of specific learning outcomes, i.e. what the learner will be able to do on successful completion of the module. The other elements of the module - the purpose, general aims, assessment details and assessment criteria - combine with the learning outcomes to state the standards in a holistic way.

While the FETAC is responsible for setting the standards for certification in partnership with course providers and industry, it is the course providers who are responsible for the design of the learning programmes. The duration, content and delivery of learning programmes should be appropriate to the learners’ needs and interests, and should enable the learners to reach the standard as described in the modules. Modules may be delivered alone or integrated with other modules.

The development of learners’ core skills is a key objective of vocational education and training. The opportunity to develop these skills may arise through a single module or a range of modules. The core skills include:

- taking initiative
- taking responsibility for one’s own learning and progress
- problem solving
- applying theoretical knowledge in practical contexts
- being numerate and literate
- having information and communication technology skills
- sourcing and organising information effectively
- listening effectively
- communicating orally and in writing
- working effectively in group situations
- understanding health and safety issues
- reflecting on and evaluating quality of own learning and achievement.

Course providers are encouraged to design programmes which enable learners to develop core skills.
1 Module Title Veterinary Diagnostic Imaging

2 Module Code N32932

3 Level 6

4 Credit Value 1 Credit

5 Purpose

This module is a statement of the standards to be achieved to gain a FETAC credit in Veterinary Nursing at Level 6. It is designed to demonstrate the application of the knowledge acquired in previous modules within a clinical veterinary practice environment. It is practice based and the student will provide written evidence of competence in each of the module areas.

6 Preferred Entry Level FETAC Level 5, Leaving Certificate or equivalent qualifications and/or relevant life and work experiences.

7 Special Requirements Completion of FETAC Small Animal Nursing L21098

8 General Aims

Learners who successfully complete this module will:

8.1. Appreciate the role of radiology and ultrasound in diagnosis of animal illness.

8.2. Know how to maintain the physical environment where imaging equipment is used.

8.3. Develop the required skills to maintain imaging equipment.

8.4. Know how to prepare animals for examination using imaging equipment.

8.5. Know how to use imaging equipment..

8.6. Know the health and safety requirements surrounding the use of imaging equipment.
9 Units

The specific learning outcomes are grouped into units.

Unit 1 Principles of radiography and ultrasound
Unit 2 Patient positioning for radiology and ultrasound
Unit 3 Exposure settings and reference tables
Unit 4 Film processing and recognition of common faults
Unit 5 HAS and veterinary radiology

10 Specific Learning Outcomes

Unit 1 Principles of radiography

Learners should be able to:

10.1.1 Understand how X rays are produced
10.1.2 Understand the function of Kv settings
10.1.3 Understand the function of the MAs settings
10.1.4 Understand the role of intensifying screens
10.1.5 Understand the role of grids
10.1.6 Apply suitable identification to X ray film

Unit 2 Patient Positioning

Learners should be able to:

10.2.1 Position an animal for X ray using support aids
10.2.2 Centre and collimate the beam on the selected sites
10.2.3 Position an animal for hip and elbow dysplasia scoring
10.2.4 Maximise use of X ray film during exposure
10.2.5 Measure the depth of area to be radiographed

Unit 3 Exposure Settings and Reference Tables

Learners should be able to:

10.3.1 Operate X ray unit to set the Kv and MAs
10.3.2 Use a reference table to calculate required settings for different areas of the body
10.3.3 Compile an exposure table for a given X ray machine

10.3.4 Collimate and centre an X ray beam using a light beam diaphragm.

10.3.5 Adjust settings when using a grid

Unit 4 Film Processing and Recognition of Common Faults

Learners should be able to:

10.4.1 Develop X ray films manually

10.4.2 Operate a semi-automatic film development system

10.4.3 Recognise under- and over-exposure

10.4.4 Recognise under- and over-development

10.4.5 Recognise common film artefacts

Unit 5 HAS and Veterinary Radiology

Learners should be able to:

10.5.1 Know the regulations that apply to veterinary practices under the Radiological Protection Act

10.5.2 Know how to use protective clothing, equipment and dosimeters.

10.5.3 Know how to prepare, use and dispose of chemicals safely.

10.5.4 Maintain health and safety records associated with use of radiological equipment.
11 Portfolio of Assessment

<table>
<thead>
<tr>
<th>Summary</th>
<th>Assignment portfolio 80%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project 20%</td>
</tr>
</tbody>
</table>

11.1 Assignment

The internal assessor will devise 4 briefs that require the candidate to produce evidence of completion of tasks related to the Specific Learning Outcomes.

11.2 Project

The internal assessor will devise a brief that requires the candidate to demonstrate how to recognise and prevent common faults which may occur during radiography.

12 Grading

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>50 - 64%</td>
</tr>
<tr>
<td>Merit</td>
<td>65 - 79%</td>
</tr>
<tr>
<td>Distinction</td>
<td>80 - 100%</td>
</tr>
</tbody>
</table>
Candidate Name: _______________________________ PPSN: _______________________
Centre: _________________________________________________ No: _____________

<table>
<thead>
<tr>
<th>Project Criteria</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Research and Background Information</td>
<td>5</td>
</tr>
<tr>
<td>Sources of Possible Errors</td>
<td>5</td>
</tr>
<tr>
<td>Recognition of artefacts</td>
<td>5</td>
</tr>
<tr>
<td>Corrective Action Proposed</td>
<td>5</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

**TOTAL MARKS**

This mark should be transferred to the Module Results Summary Sheet

*Internal Assessor’s Signature:* ______________________________ date: __________

*External Authenticator’s Signature:* __________________________ date: __________

- The internal assessor is required to enter here the question numbers answered by the candidate.
<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Max Mark</th>
<th>Candidate</th>
<th>Assignment Candidate Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Overall Presentation</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completeness of data entered</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy of information presented</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth of Understanding of Procedure</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>80</strong></td>
<td><strong>20</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

**TOTAL MARKS**

This mark should be transferred to the Module Results Summary Sheet

**Internal Assessor’s Signature:** ___________________________ **Date:** _______________

**External Authenticator’s Signature:** ___________________________ **Date:** _______________
# FETAC Module Results Summary Sheet

**Module Title:** Veterinary Diagnostic Imaging  
**Module Code:** N32932

<table>
<thead>
<tr>
<th>Candidate Surname</th>
<th>Candidate Forename</th>
<th>Mark Sheet 1</th>
<th>Mark Sheet 2</th>
<th>Total 100%</th>
<th>Grade*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20</td>
<td>80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Marks per Marking Sheet**

<table>
<thead>
<tr>
<th>Grade*</th>
</tr>
</thead>
<tbody>
<tr>
<td>D: 80 - 100%</td>
</tr>
<tr>
<td>M: 65 - 79%</td>
</tr>
<tr>
<td>P: 50 - 64%</td>
</tr>
<tr>
<td>U: 0 - 49%</td>
</tr>
<tr>
<td>W: candidates entered who did not present for assessment</td>
</tr>
</tbody>
</table>

**Signed:**  
**Internal Assessor:** ____________________________ **Date:** _________________

This sheet is for internal assessors to record the overall marks of individual candidates. It should be retained in the centre. The marks awarded should be transferred to the official FETAC Module Results Sheet issued to centres before the visit of the external Authenticator.
Glossary of Assessment Techniques

Assignment

An exercise carried out in response to a brief with specific guidelines and usually of short duration.

Each assignment is based on a brief provided by the internal assessor. The brief includes specific guidelines for candidates. The assignment is carried out over a period of time specified by the internal assessor.

Assignments may be specified as an oral presentation, case study, observations, or have a detailed title such as audition piece, health fitness plan or vocational area profile.

Collection of Work

A collection and/or selection of pieces of work produced by candidates over a period of time that demonstrates the mastery of skills.

Using guidelines provided by the internal assessor, candidates compile a collection of their own work. The collection of work demonstrates evidence of a range of specific learning outcomes or skills. The evidence may be produced in a range of conditions, such as in the learning environment, in a role play exercise, or in real-life/work situations.

This body of work may be self-generated rather than carried out in response to a specific assignment eg art work, engineering work etc.

Examination

A means of assessing a candidate’s ability to recall and apply skills, knowledge and understanding within a set period of time (time constrained) and under clearly specified conditions.

Examinations may be:

• practical, assessing the mastery of specified practical skills demonstrated in a set period of time under restricted conditions
• oral, testing ability to speak effectively in the vernacular or other languages
• interview-style, assessing learning through verbal questioning, on one-to-one/group basis
• aural, testing listening and interpretation skills
• theory-based, assessing the candidate’s ability to recall and apply theory, requiring responses to a range of question types, such as objective, short answer, structured, essay. These questions may be answered in different media such as in writing, orally etc.

Learner Record

A self-reported record by an individual, in which he/she describes specific learning experiences, activities, responses, skills acquired.

Candidates compile a personal logbook/journal/diary/daily diary/record/laboratory notebook/sketch book.

The logbook/journal/diary/daily diary/record/laboratory notebook/sketch book should cover specified aspects of the learner’s experience.
**Project**

A substantial individual or group response to a brief with guidelines, usually carried out over a period of time.

Projects may involve:

- research – requiring individual/group investigation of a topic
- process – eg design, performance, production of an artefact/event

Projects will be based on a brief provided by the internal assessor or negotiated by the candidate with the internal assessor. The brief will include broad guidelines for the candidate. The work will be carried out over a specified period of time.

Projects may be undertaken as a group or collaborative project, however the individual contribution of each candidate must be clearly identified.

The project will enable the candidate to demonstrate: *(some of these – about 2-4)*

- understanding and application of concepts in (specify area)
- use/selection of relevant research/survey techniques, sources of information, referencing, bibliography
- ability to analyse, evaluate, draw conclusions, make recommendations
- understanding of process/planning implementation and review skills/planning and time management skills
- ability to implement/produce/make/construct/perform
- mastery of tools and techniques
- design/creativity/problem-solving/evaluation skills
- presentation/display skills
- team working/co-operation/participation skills.

**Skills Demonstration**

Assessment of mastery of specified practical, organisational and/or interpersonal skills.

These skills are assessed at any time throughout the learning process by the internal assessor/another qualified person in the centre for whom the candidate undertakes relevant tasks.

The skills may be demonstrated in a range of conditions, such as in the learning environment, in a role-play exercise, or in a real-life/work situations.

The candidate may submit a written report/supporting documentation as part of the assessment.

Examples of skills: laboratory skills, computer skills, coaching skills, interpersonal skills.
FETAC Assessment Principles

1. Assessment is regarded as an integral part of the learning process.

2. All FETAC assessment is criterion referenced. Each assessment technique has assessment criteria which detail the range of marks to be awarded for specific standards of knowledge, skills and competence demonstrated by candidates.

3. The mode of assessment is generally local i.e. the assessment techniques are devised and implemented by internal assessors in centres.

4. Assessment techniques in FETAC modules are valid in that they test a range of appropriate learning outcomes.

5. The reliability of assessment techniques is facilitated by providing support for assessors.

6. Arising from an extensive consultation process, each FETAC module describes what is considered to be an optimum approach to assessment. When the necessary procedures are in place, it will be possible for assessors to use other forms of assessment, provided they are demonstrated to be valid and reliable.

7. To enable all learners to demonstrate that they have reached the required standard, candidate evidence may be submitted in written, oral, visual, multimedia or other format as appropriate to the learning outcomes.

8. Assessment of a number of modules may be integrated, provided the separate criteria for each module are met.

9. Group or team work may form part of the assessment of a module, provided each candidate’s achievement is separately assessed.