



Institiúid Teicneolaíochta Trá Lí

Institute of Technology Tralee

NEW COURSE EVALUATION External Panel of Assessors* ASSESSORS' REPORT

Proposed Award Title(s)	BSc (Honours) in Veterinary Bioscience							
Relevant School	Business, Computing & Humanities		Science, Technology, Engineering & Mathematics			X	Health & Social Sciences	
Duration							4 Years	X
Date of Review	30/11/2016							
Panel of Assessors*	<p>Chairperson: Dr Dermot Douglas</p> <p>Secretary: Ms Mary Rose Stafford</p> <p>Members:</p> <p>Mr Eugene Mc Grath – Industry Representative</p> <p>Dr David Ryan – IT Carlow</p> <p>Dr Brendan O' Connell – CIT</p> <p>Dr Kieran Mc Carthy - NUIG</p>							
* This report form may be used by External Experts								

**Panel of
Assessors
Meetings**

Meeting with President/Registrar /Head of School/ Head of Department
/Programme Leader(s): Dr Gearoid Sayers & Dr Eilish Broderick
Proposal Documentation Provided

Discussion

Role of panel is regulatory and also developmental.

Rationale/Market Demand and Need for Programme:

Veterinary Bioscience new in Ireland but very well established globally
Theme identified is **diagnostic** – expert in vet diagnostics in lab or research.
Hands on with animals, link between field scientist and the know-how in to the lab from a diagnostic point.

Discussed Entrepreneurship and Business Management within programme but wanted to deliver scientific skill set with lab management. Supports for enterprise boards etc. and through various entrepreneurial competitions available for anyone who wishes to pursue their own business development. Innovation and entrepreneurship could be incorporated, is Sales & Marketing coming in too early in the programme and would it be much more appropriate in later years.

Graduate – what job opportunities will the graduate have

Animal Health research
Laboratory Diagnostics
Regulatory
Sales & Marketing
Pharmaceutical/Bio-pharma
Advisory – animal nutrition/reproduction

Strategic Fit:

This is a niche programme within the region. Expertise exists within the department but needs to be augmented with some limited recruitment. Delivery of the programme will be facilitated and enhanced by drawing on established links with industry. The proposed programme fits well with other programmes in the department viz. Wild Life Biology and Agriculture Science, from which it can draw shared resources and expertise. .

Resources:

Additional veterinary staff (1 full time equivalent) and equipment is required. These additional resources have been approved by the Executive. Current staff teaching on the Food Science programme will be available to this new programme. Resources from Shannon ABC and Teagasc will be available to the programme.

Meeting with Programme Development Team

The panel was informed that the survey was wider than what is indicated above and recommend that the submission document should include a paragraph to indicate the range and extent of the overall formal and informal consultation process involved with industry; its utility in assessing industry needs and its role in programme design.

Entry Requirements/Access:

These are set at the normal Institute Level 8 minimum entry requirements.

The document must be clear in its statement of minimum entry requirements for different categories of applicant viz. , be specific for Leaving Certificate, mature learners, further education graduates, international applicants; learners with special needs etc. Minimum entry standards are set on the basis that they underpin a learner's capacity to participate in programme. The panel recommends that the Institute should explore targeting successful programmes run by ETBs that could act as feeder courses for this programme.

Progression/Transfer Opportunities:

This programme needs to show progression from the honors degree to the next level on the NFQ. The submission should detail at least two coherent progression routes e.g. masters by research in ITT or a cognate taught masters.

As the programme has not yet been validated, the phrase indicating that it has 'international recognition' on p. 15 should be changed to read 'international focus'.

Page 16 The criteria for RPL as an entry mechanism should indicate that it is based on a level of knowledge skill and competence equivalent to the Leaving Certificate (or Level 4/5) generic framework standard. LC.

Programme Structure and Content:

Discussed

Proposed Programme Course Schedule:

It appears that credit is assigned on the basis of 20 hours of 'notional' student effort for 1 ECTS credit. This is at the low end of the ECTS scale (20 – 30 Notional effort hours per credit). The average in Europe is 25 hours and this is also the norm suggested by QQI. Using a larger number of notional hours per credit has the advantage of providing more flexibility in programme design without having to increase contact time.

Discussion took place regarding the weighting given in contact hours between theory, practical and assessment weighting. Currently, there are no specific ITT guidelines. The panel was surprised that some practical modules will be assessed by written exam. The programme team cited the example that they did not see value in requiring the students to carry out a dissection as a practical examination. The panel was of the view that there might be a better way to do this, for example – set up a number of stations

Chemistry 1 – L/O same issue as addressed above; reading resource from 2006 appears very dated? Is there a more up-to-date reference?
As mentioned at the beginning of this section, 40% of credit is given for lab experiments. It is necessary, in the indicative content to identify where the skills base is and what skills will be obtained.

Essential Scientific Maths – 80% attendance threshold identified is applied rigorously, pass mark is 40%. Update reading list.

Computer Apps & Scientific Communications – generic module focusing on report writing and presentation skills. Recommended resource Microsoft office 2003 dated.

Biology 2

Vet Anatomy 2 – be more specific about dissection

Principles of Vet Bio Science 2 – assessment strategies need to be refined, more nuanced.

Selling & Sales Management – value of the module at this stage is not clear.

Chemistry 2 – L/O & references

Physics – Reading lists, purpose of having it is to relate to bio-mechanics but linkage not there. Utility is diagnostic instrumentation.

Animal Physiology – It is questionable whether learners will gain an 'advanced' understanding in an introductory module. This module is valued at 10 credits but has only 3 learning outcomes. L/O 1 & 3 are too basic, recognize and describe.

Stats & Quality Control – The fact that the final examination covers the quality control part of the module should be more clearly specified. L/O wording needs to be reviewed.

Animal Reproduction 1 & 2 – L/O and assessments. Formal end of 'year' should be end of 'semester'

Biochemistry 1& 2 – artificial distinction between the two modules is purely to do with the skills of the lecturer rather than the appropriateness of the subject area. L/O 'become familiar with' is not appropriate, be competent or know...active verb must be specific. Use 'demonstrates' instead.

Cells Tissues & Organs – This title has been changed. Veterinary Histology is new module title. Scope of practicals in the 24 hours appears to be limited to the examination of slides. Lab diagnostic skills need to be developed to include tissue sampling, fixation, embedding, sectioning and staining. These are fundamental laboratory skills that would be expected of someone working in a veterinary bioscience laboratory. A microtome will be required, but it appears that this is available in Shannon ABC.

Introduction to Analytical Techniques – L/O 'recognise' should be changed to select or apply.

Animal Nutrition – Currently the module consists of 5 hours of theory, but no practical component. This is the only nutrition module and excellent software is available that could be used to address the practical component. The panel was of the view that the module should be split 3/2 theory/practical. Issues with L/O & assessment need to be addressed. Silage analysis and feed analysis could also be included.

Intro to Vet micro-biology – L/O expression 'familiar' is not an appropriate active verb and needs to be changed.


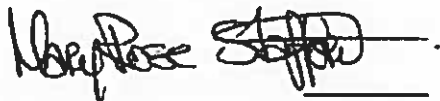
Pharmacology – L/O expression 'recognise' is not an appropriate active verb and needs to be changed.

Molecular Biology -

Vet Drug Delivery Systems – Assessment strategy & L/O 5 not aligned. Should not be a final written exam.

	<p>Learner Workload Including Assessment:</p> <p>Same learning outcomes assessed over and over again and all assessments assess all learning outcomes. This leads to confusion as to when the learning outcome has been achieved. All assessment strategies must be linked to specific learning outcomes. Much clearer assessment strategy required.</p> <p>Failed Elements: Labs have to be passed</p> <p>Staff Expertise: Reliance on external experts for delivery, what level of collaborative delivery and arrangements are in place. MOUs? This information should be available in the revised programme document. Teagasc adjunct staff to deliver elements and students will spend time with them. SLA exists with Teagasc in Clonakilty to deliver on existing programmes. Resource through guest lecturers on other requirements. Page 131 outlines need to recruit another vet practitioner into the department. Industry partner experts to deliver a section of modules, fully resourced by ITT. Shannon ABC is part of delivery mechanism. each semester there is contact with animals - one full week in Moy Park, block of study; field trips included for demonstration by local farmer, equine centre, , structured visits with practical learning objectives. Be specific about PBL and the modules in which it is applied.</p> <p>Embedded Standards/Exit Awards:</p> <p>Exit Awards at Level 6 and Level 7 embedded but not an award for entry. Would require separate programme learning outcomes for validation for <i>ab initio</i> level 7 awards. Documentation is not a ladder of progression it is a level 8 with exits. Page 26 needs to be revised. The same generic title should be used for the exit awards at level 6 and 7 viz. Higher Certificate in Animal Science and Bachelor of Science (Ordinary) in Animal Science.</p>								
Section 1	FINDINGS OF ASSESSORS								
Section 1.1	<p><u>General Observation, Programme Aims & Objectives</u></p> <p>Overall a programme which has niche appeal Document should better reflect graduate skills set Aims and Objectives should be moved to Programme Overview</p>								
Section 1.2	<p><u>Award Type, Level, Title and Programme Aims & Objectives</u></p> <table border="0"> <tr> <td>Award Type:</td><td>Major Award</td></tr> <tr> <td>Award Level:</td><td>Level 8</td></tr> <tr> <td>Award Title:</td><td>BSc (Honours)</td></tr> <tr> <td>Programme Title</td><td>BSc (Honours) in Veterinary Bioscience</td></tr> </table> <p>Embedded Exit Awards</p>	Award Type:	Major Award	Award Level:	Level 8	Award Title:	BSc (Honours)	Programme Title	BSc (Honours) in Veterinary Bioscience
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Section 1.4	<p><u>Physical Resources</u></p> <p>Some new software packages required, particularly for the modules on Animal Nutrition and Computer Applications and Scientific Communication. . Use of external industry partners and Shannon ABC to supplement ITT facilities</p>
Section 1.5	<p><u>Staff Resources (Curriculum Vitae & Expertise of Staff)</u></p> <p>CPD of staff in this new area should be encouraged and facilitated.</p>
Section 1.6	<p><u>Proposed Course Schedules</u></p> <p>Appropriate</p>
Section 1.7	<p><u>Compatibility of Programme Structure and Content with NQAI' Policy on Access, Transfer & Progression</u></p> <p>Must state minimum entry requirements; be specific for Leaving Certification, mature learners, further education, with the learner's capacity to participate in programme clearly identified. Target FE courses run in ETBs successful provider</p>
Section 1.8	<p><u>Compatibility of Programme with Relevant QQI Award Standards</u></p> <p>Align learning outcomes of the programme with national standards; drill down the specific standards and place at the appropriate level. Learning Outcomes for the same sub-strand of Knowledge, Skill or Competence should not be the same at each level between 6/7/8(see - Know how, skill and selectivity at level 6 and 7).</p>
Section 1.9	<p><u>Embedded Standard(s)/Exit Award(s)</u></p> <p>Exit Awards identified but clear programme learning outcomes at each level need to be identified and mapped against the national standards at each level. There is no direct entry onto embedded, exit awards. They will not appear on the CAO lists.</p>

	<ul style="list-style-type: none"> • Edit document to clearly express learning outcomes and appropriateness of the terminology at each level. • Draft assessment strategies to ensure appropriate alignment of assessment instruments with learning outcomes. • Remove the selling & sales management module • Introduce module(s) on hematology and clinical bio-chemistry • Re-draft internship modules to clearly demonstrate the minimum learning outcomes and assessment strategy linked to them. • Animal nutrition should to be split into clear theory and practical elements – there is available software to support this practical element. • Specify, in detail, the nature and location of the research and project assessment structure that may be used in lieu of internships.
Section 2.3	<p><u>Recommendations</u></p> <p>As recommended for each module above</p> <p>Graduate Profile and Skills set not clearly outlined in the programme but a good presentation was made in the meeting, this should be included in the submission</p> <p>The full extent and nature of the research conducted to inform development of the programme was not clear in the document. Continuing engagement with industry to inform course development, for internships and for employment opportunity should be clearly evident in the submission document.</p>
Section 2.4	Reasons for Rejection (if appropriate)
<p>Signed Chairman:  Date: 08/12/2016</p> <p>Signed Secretary:  Date: 09/12/2016</p>	