THE UNIVERSITY OF READING

SUMMARY OF THE PERIODIC REVIEW OF DEGREES IN ANIMAL AND MICROBIAL SCIENCES

1. Degree Programmes Reviewed

• BSc Animal Science
• BSc Biochemistry
• BSc Biological Sciences
• BSc Botany and Zoology
• BSc Microbiology
• BSc Molecular Biology (discontinued from October 2002 entry)
• BSc Pathobiology
• BSc Psychology and Biology
• BSc Psychology and Zoology (discontinued from October 2002 entry)
• BSc Zoology
• MSc Wildlife Management and Conservation


3. Objectives of the Periodic Review

The objectives of the Periodic Review were to:

• Monitor the quality and standards of the degree programmes under review
• Enable the School of Animal and Microbial Sciences to evaluate its taught programme provision, particularly student achievement of the appropriate academic standards, and the learning opportunities offered to students
• To enable an independent Panel to review this self-evaluation through consideration of documentation and discussions with staff and students
• Provide a means by which the School was able to reflect on the success, development and possible improvement of its taught programmes
• Ask fundamental questions about the rationale, structure and resourcing of the programmes under review
• Consider the educational aims and objectives of the programmes
• Review teaching, learning and methods of assessment in their contexts
• Consider whether the programmes under review should continue to run for a further period of up to six years

4. Conduct of the Periodic Review

The Periodic Review was conducted by a Panel chaired by the Director of Teaching and Learning of the Faculty of Life Sciences, and also comprising two other internal members of academic staff (neither from the School of Animal and Microbial Sciences) and two external academic members specialising in Biological Sciences.

The Panel received a range of documentation in advance of the Review, including a Self-Evaluation Document prepared by the School and also relevant programme specifications. During the Review Visit, the Panel considered other documentation and met with relevant staff from the School and from University service departments. Members of the Panel also met with current students studying on the degree programmes under review and were given a guided tour of the facilities.
5. **Evidence Base**

In addition to the meetings held with academic staff and current students, the Panel considered a wide range of evidence, including examples of student work with staff feedback, copies of programme handbooks, minutes of relevant committees and statistical data. The Panel was able to see External Examiners reports for the three previous years, as well as comprehensive responses written by the School’s Director of Teaching and Learning. The reports from the External Examiners commented on the high levels of student achievement. Additional material on the numbers of graduates staying on to study for a Higher Degree was requested by the Panel and this was supplied promptly.

The Panel was also able to see the evaluation questionnaires produced by students and the minutes of recent meetings of the termly School Staff/Student Forum, which indicated that appropriate action was taken in response to issues raised.

6. **External peer contributors to process**

The external members of the Review Panel were present for the duration of the Periodic Review. The Joint Faculty Board for Teaching and Learning for Science/Life Sciences appointed the external members, after considering nominations from the School of Animal and Microbial Sciences. The role of these external members was to provide subject expertise and judgement of the validity and appropriateness of the programmes under review.

7. **Overview of the main characteristics of the programmes covered by the review**

The degree programmes offered by the School are of excellent quality at both undergraduate and postgraduate level. It was evident from the enthusiasm and focus of the students that they are enjoying their programmes and the admission and progression statistics reflect this.

The ways in which the expected outcomes for individual modules map to the programme outcomes as a whole are exemplary, and demonstrate to students how their academic progress develops at increasing depth in successive years. The School aims to include appropriate skills, transferable and subject specific, in all their degree programmes and the Panel was impressed at the success with which the School delivers these skills to its students. The Panel agreed that the exposure to research laboratories and research training offered to all Part 2 students in the Concepts and Skills module provides an excellent preparation to students for their final year project. The School is teaching to its strengths and there is clear evidence that the teaching is informed by the research interests of the academic staff.

The undergraduate and postgraduate programmes are in line with the National Framework for Higher Education Qualifications and comply with the relevant Benchmark Statements (Agriculture, Forestry, Agricultural Sciences, Food Sciences and Consumer Sciences and Biosciences).

The Panel was impressed with the general enthusiasm and focus of the students it met. They were very clear about the benefits of the education they were receiving and of their reasons for coming to Reading. The positive attitude they showed and their clear understanding of and agreement with what they and the School were aiming for were most impressive.

8. **Conclusions on innovation and good practice**

Examples of good practice identified included:

- The School has clearly stated aims in terms of the provision of undergraduate and taught postgraduate programmes, and the programme outcomes provide clear guidance on how students are expected to acquire both specific and generic transferable skills together with
knowledge and understanding and other specific attributes. The Panel was impressed at the success with which the School delivers these skills to its students. The ways in which the expected outcomes for individual modules map to the programme outcomes as a whole are exemplary, and demonstrate to students how their academic progress develops at increasing depth in successive years.

• The design of the two Concepts and Skills modules is impressive – the modules have clearly been carefully considered and are well targeted. The exposure to research laboratories and research training offered to all Part 2 students in the Concepts and Skills module provides an excellent preparation to students for their final year project.

• The recent introduction of the Teaching Strategy Group is an excellent development and the Panel expects that this will provide a coherent approach to the School’s teaching and learning.

9. Conclusions on quality and standards

The Review Panel concluded:

• That they were impressed by the organisation of teaching within the School and the effective way in which it delivers what it sets out to achieve. This was particularly noticeable in the meticulous implementation of policies where attention to detail is needed to ensure that the delivery is effective.

• The overall effectiveness of the teaching and learning is evident from the reports of the External Examiners which showed clear satisfaction with many aspects of the degrees including the overall quality of graduates and the organisation of teaching.

• The Panel was particularly impressed by the quality and organisation of the MSc in Wildlife Management and Conservation. It is clear that the students greatly enjoy the programme and appreciate the support offered to them.

• The School has clearly stated aims in terms of the provision of undergraduate and taught postgraduate programmes, and the programme outcomes provide clear guidance on how students are expected to acquire both specific and generic transferable skills together with knowledge and understanding and other specific attributes. The programmes, as outlined in the programme specifications are being delivered effectively.

10. Conclusions on currency and validity of the programmes under review

The Review Panel concluded that the programmes under review remained current and valid and recommended that all programmes be re-approved to run for a further six years, or until such time as the next Periodic Review of programmes in Plant Sciences and Psychology respectively for the following:

• BSc Botany and Zoology
• BSc Psychology and Biology
• BSc Psychology and Zoology (discontinued from October 2002 entry)

The University Board for Teaching and Learning approved these recommendations on 20 February 2004.
11. **Summary of Recommendations**

The School of Animal and Microbial Sciences was asked to address the following:

The Review Panel considers it **advisable** that:

(a) The School develop its approach to ensuring comparability of outcomes between theoretical and laboratory-based projects to ensure that it is evident to all that the types of projects available are of equal value. This should remove any doubt that the non-laboratory-based projects are less well regarded and that it is more difficult to obtain good marks for them. Although the present criteria are reasonably explicit and comprehensive, clarification for students on the assessment should be provided, particularly for the non-laboratory-based projects, and internal examiners should provide a more detailed justification of how final marks are awarded.

(b) The School improves co-ordination across modules on the deadlines for coursework submission, especially with the timing of the setting of coursework. The provision of a timetable of deadlines at the commencement of each session should allow students to plan their workload and hence deliver each piece of coursework within the set time limits.

(c) The School addresses the variability that exists between staff on the quality of feedback on student progress and performance. When reporting results all staff and students in the School should be aware of the University policy in relation to the use of letter grades and percentage marks. In addition, a common approach to the student's use of referencing in coursework needs to be adopted by all staff to ensure fairness to students.

(d) The assessment arrangements for individual modules should be included in all Module Handbooks.

The Review Panel considers it **desirable** that the School consider:

(e) How best to develop industrial links and how the arrangements for the industrial placements for the BSc Biological Sciences with Industrial Experience will be managed to ensure a supply of appropriate placements. The Panel suggests that the School looks at best practice in other areas of the University that offer programmes with an industrial placement.

(f) Whether the weighting of coursework assessment in some modules in Parts 2 and III(3) is appropriate compared to the effort and time of expected study – the Panel suggested that an increase in weighting of at least 10% would be appropriate in some cases.

(g) Whether students from outside of the School who have opted to take modules from the School should be invited to attend the Staff/Student Forum.

(h) The future of specialist programmes with small intakes and whether these programmes are viable in their present form, particularly given that these programmes require the delivery of modules taken by only a small number of students.

(i) Whether it would be better to have the same entry requirements for the BSc Biological Sciences and the BSc Biological Sciences with Industrial Experience.

(j) How the range of pathways through the BSc in Biological Sciences could be used as a very positive selling point to potential applicants in literature advertising the programmes.
(k) How the School could make more use of its strong research profile and the incorporation of research into the teaching curriculum in the advertising of its programmes as it is clear that this aspect of teaching is an important attraction to some students.

(l) Whether it is necessary to provide individual programme handbooks as well as the Module Handbook for each Part or whether these could be provided in another format, for example, in combined form, with some information on the web.

(m) Improving the decoration in the teaching laboratories. Minor maintenance (painting ceilings brighter colours, cleaning roof windows and so on) could make a significant difference to the atmosphere in the laboratories.

12. **Summary of actions taken in response to the Review**

The School of Animal and Microbial Sciences is considering the issues raised as follows:

(a) Theoretical projects involving analysis of published or unpublished data form an essential component of the list of projects available to the Part 3 students. Although in the past some purely literature-based projects have been carried out, these have been withdrawn two years ago on the advice of the School’s external examiners. The criteria for assessment of all projects will in the future be published in the Project Handbook issued to all Part 3 students and internal examiners will be asked to provide detailed justification on the final marks awarded. The different types of projects and the assessment criteria will also be fully discussed with the students in a timetabled session in term 6 before making their choice of project.

(b) All module descriptions and module timetables for the 2004-05 academic year onwards have been modified accordingly and they state the relevant deadlines for the module. For core modules the School has attempted to spread the timing of assessments to reduce “bunching” at the end of each term. However, some “bunching” is extremely difficult to avoid first due to the large number of optional modules available from different schools and second due to the fact that module coordinators reasonably expect to time assessments once the bulk of the teaching has been presented.

(c) Although it has been the School’s policy to publish only letter grades for the information of students, there have been occasions when individual colleagues had deviated from it. All staff in the School have been reminded of the policy and the requirement for marks to be returned to the Academic Services Office which will then publish the marks as letter grades on the appropriate School notice boards. In the long-term, the School hopes that marks will be posted electronically on Blackboard so that a student may only have access to his/her individual marks.

(d) Each module description is currently 2-3 pages in length and with the number of modules offered by the School and its sister schools module handbooks have become very bulky documents. From the next academic year, all the Programme Handbooks issued to students will include a list of all the relevant modules and students will be directed to the complete electronic Module Descriptions for Parts 1-3 available on the university’s web pages.

Recommendations (e) to (m) of the Periodic Review Panel are to be considered in the course of 2004 during meetings of the School’s Teaching Strategy Group, the School’s Teaching and Learning Committee, the School’s Boards of Studies and the School’s Staff Meeting, and implemented as appropriate.