



UNIVERSITY SUBJECT REVIEW

Provision provided by the School of Life Sciences

December 2009

Preface

Purpose of University subject review

The purpose of University subject review is to provide a mechanism which enables the University to be confident that the academic standard set and approved for all credit bearing and non-credit bearing provision and the quality of learning opportunities offered to all students meet University and Scottish Funding Council expectations.

Outline of the procedure

University subject review is implemented in three complementary stages: preparation, led by a School Quality Committee and monitored by the Head of School; scrutiny, led by Academic Development; and, implementation of a school enhancement plan, led by a School Quality Committee and monitored by the University Quality Committee. Faculty Quality Committee provides support, advice and guidance to schools throughout the process as appropriate. The procedure is evidence-based and is reliant on information gathered during faculty and school-based quality assurance and enhancement activities typically within a six-year cycle. University subject review has been designed to be developmental in nature and encourages self-critical reflection through promoting dialogue between peers on areas where quality might be improved.

Evidence

In order to obtain evidence for the review, the Panel carries out a number of activities, including scrutinising a self critical reflection produced by the school with responsibility for the subject areas being reviewed, reviewing the effectiveness of quality mechanisms and their associated documentation, and holding discussions with relevant staff and students. The Panel's discussions are also informed by University policy and procedures and external subject benchmark information.

Outcome of the review

The outcome of the review is a school enhancement plan developed by the School Quality Committee using information from the review report. The report records the Panel's findings in relation to the effectiveness of the measures being implemented by the school to set and maintain the academic standard of its provision and to enhance the quality of the learning experience of all of its students. The report includes areas of good practice worthy of further dissemination and recommendations made by the Panel to improve the school's management of its provision. A draft school enhancement plan noting the good practice identified by the review panel and any recommendations made will form part of the review report.

The school enhancement plan.

Within a timescale agreed by the Head of School and Academic Development the school completes an enhancement plan by identifying: the action to be taken to either share good practice or address recommendations; the individual with responsibility for implementing the action; a completion date; and, the means by which the success or otherwise of the action will be evaluated and reported. School Quality Committee will monitor the implementation of the enhancement plan and provide their Faculty Quality Committee with regular progress reports. Faculty Quality Committee will provide University Quality Committee with a progress report on the implementation of the enhancement plan as part of the annual reporting procedure.

Executive summary

Summary

The School of Life Sciences is one of three schools within the Faculty of Health, Life and Social Sciences. There are four subject groups within the School: environmental biology, biomedical science, microbiology and biotechnology, and sport and exercise science. The scope of this review includes all provision developed and delivered by the School which takes account of the expectations set out in the following subject benchmark statements:

- Biomedical Science
- Biosciences
- Earth Sciences
- Environmental Science and Environmental Studies
- Hospitality, Leisure, Sport, and Tourism.

A list of the programmes delivered by the School at the time of the review is included as Appendix 1.

The provision in all four subject groups is effectively managed by the School and the academic standards set continue to meet subject, University and sector expectations. Mechanisms are in place to ensure that the curriculum is relevant and current and influenced by staff research interests. The provision is delivered using a variety of relevant learning, teaching and assessment approaches. A range of effective mechanisms are in place to manage the student experience across all levels of the School's provision in line with University expectations. The self-critical reflection contained areas of good practice and a reflection on areas where developments are required which demonstrated to the Panel that the School was effectively engaging in enhancement-led activities.

Good practice

The Panel identified the following areas of **good practice** for further dissemination University-wide:

- The flexibility provided by the suite approach to curricular design contributes to the enhancement of the students' learning experience as it enables students to specialise in a chosen field or to change their direction of study at set points without compromising the integrity of their final award. The suite approach and the resultant sharing of teaching across modules is also an efficient use of learning and teaching resource (paragraphs 3 and 4).
- Providing first year students with an appropriate mix of separate theory and practice modules which provide students with applied scientific and employability skills. The move in the second year to merged modules assists students to develop their scientific skills in preparation for their research project (paragraph 12).
- The integration of research students into the wider school through delivery of demonstrations and other activities contributes to the development of the research students' individual skill base while providing role models for undergraduate students with research aspirations of their own (paragraph 14).
- All four subject areas employ an appropriate range and variety of assessment methods which have been designed to develop students' employability skills (paragraph 15).

- The provision of academic support to first-year biological sciences students without a firm background in biology through additional tutorials to assist them in their learning (paragraph 18).
- The School's proactive and multi-strand approach to internationalising its curriculum which includes combining the experience gained from delivering programmes in partnership with HKU-SPACE in Hong Kong, the development of appropriate case studies to meet the needs of international students studying on Edinburgh-based programmes and the provision of research-driven overseas field trips (paragraph 26).
- The lead role taken by the School's Teaching Fellows in assisting colleagues to engage with a variety of University initiatives (paragraph 27).
- Encouraging students to comment on their critical reflection before the visit to the School and including written comments from students as part of the evidence base scrutinised by the Panel which encouraged students to engage with processes to enhance the quality of their learning experience (paragraph 31).
- The high level of support for staff development activities in support of excellence in learning, teaching and assessment (paragraphs 31 and 32).

Recommendations

The Panel recommends that the School of Life Sciences:

- continues to explore whether alternatives to the current compulsory research project for students studying a bachelor's degree with honours should be introduced, for example, introducing an SCQF level 10 60-credit dissertation to be offered alongside the existing research project might be attractive to students wishing to pursue a scholarly career (paragraph 10)
- continues to review the decision to discontinue accreditation of the biomedical sciences provision with the Institute of Biomedical Sciences with a view to ensuring that its students are not disadvantaged because their awards do not carry professional body accreditation or recognition (paragraph 11)
- continues to monitor the provision of assessment feedback to students to ensure that it is available to all students on a consistent and equitable basis (paragraphs 13 and 17)
- continues to monitor the effectiveness of the part-time student learning experience and to continue its participation in University discussions relating to part-time study (paragraphs 19 and 20)
- completes a review of its operation of the personal development tutor scheme and shares its findings with a view to enhancing the University-wide system (paragraph 28)
- continues to evaluate the use of technology as a means of engaging students in their learning with a view to developing good practice guidelines (paragraph 30).

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Conduct of the review

- 1 This report presents the findings of the University subject review of provision provided by the School of Life Sciences (the School). The review was carried out by:
Dr Jenny Rees, Vice-Principal (Academic Quality and Customer Service) (Panel Convenor).
Dr Trevor Cartledge, Principal Lecturer (retired), Nottingham Trent University.
Chris Barnes, Independent Sports Science Consultant.
Arthur Morrison, Depute Dean, Edinburgh Napier Business School.
Fran Alston, Associate Dean (Academic Quality and Customer Service) Faculty of Health, Life and Social Sciences.
Dr. Jayne Donaldson, Head of School of Nursing Midwifery and Social Care.
Christine Donnelly, Teaching Fellow, School of Health and Social Sciences.
Stuart Campbell, Campaigns and Representation Officer, Napier University Students' Association.
Grant Horsburgh, Head of Quality Enhancement (Panel Secretary).

Setting the review in context

- 2 The School of Life Sciences is one of three schools within the Faculty of Health, Life, and Social Sciences. The School has 46 full-time academic staff (including six Teaching Fellows), 13 research fellows, 10 research assistants, 18 technicians, and seven administrative staff. All academic staff and modules are specifically linked to one of the School's four subject groups: environmental biology, biomedical science, microbiology and biotechnology, and sport and exercise science. Each subject group delivers both undergraduate and taught master's programmes. At the time of the review 408 full-time and 14 part-time undergraduate students were studying on the biological sciences suite and 461 full-time and five part-time undergraduate students studying on the sport and exercise science suite, including 48 students at Edinburgh's Telford College. Taught master's student numbers were 31 full-time, seven part-time and 31 distance learning students studying on the environmental suite; 51 full-time and 11 part-time students studying on the biomedical suite; and, seven full-time and one part-time student studying on the MSc Sport Performance Enhancement. The School has 34 research, mainly PhD, students.

- 3 The School has an established and successful record in the development of the suite approach to curricular design. With the exception of one programme, all undergraduate provision is offered as part of the biological sciences suite (nine routes) or the sport and exercise science suite (five routes). Each suite contains one general route which provides students with a wide choice of modules, while the other routes follow specific paths where students study a combination of modules specific to the route, but with limited or no choice. Each suite also offers a common first year which enables students to gain an insight into the breadth of the subject and allows them to decide at the end of their first year of study whether to continue with their original choice of route or choose an alternative. This suite approach to programme design and delivery is also applied to the School's taught postgraduate provision where four routes in both environmental biology biomedical science and biotechnology are available.

4 The School noted in its critical review that the flexibility provided by their suite approach to curricular design was attractive to applicants. During discussions with students the Panel noted that they concurred with this view and that they were fully aware of the School's procedures for changing programme pathways at the end of their first, or in some cases, their second year of study. The Panel concluded that the flexibility provided by the suite approach to curricular design contributes to the enhancement of the students' learning experience as it enables students to specialise in a chosen field or to change their direction of study at set points without compromising the integrity of their final award. The suite approach and the resultant sharing of teaching across modules is also an efficient use of learning and teaching resource.

5 The School has a well-established and successful partnership in delivering programmes with Hong Kong University (HKU-SPACE) which has resulted in over 1,000 students graduating from a BSc Biological Sciences 60 credit part-time top-up programme during the 16 years that the programme has been offered. To meet the needs of the Hong Kong market from September 2010 the School will be offering in partnership with HKU-SPACE a 240 credit part-time programme leading to a bachelor's degree with honours. A programme leading to a MSc Biomedical Science is also offered in partnership with HKU-SPACE and there is an intention to introduce the MSc Biomedical Science (Biotechnology) in partnership with HKU-SPACE in 2010-11. A characteristic of the student learning experience on all provision offered in partnership with HKU-SPACE is that the delivery is blended, involving the participation of School academic staff online and periodically in Hong Kong.

6 The School also has a successful history in offering pathways to higher education for applicants from further education. For example, the sport and exercise science suite has been designed to accommodate articulation from further education. Since its introduction in 2000-01, it has annually recruited in excess of 100 students into the second and third years of its programmes including students who are studying their third year under a partnership arrangement at Edinburgh's Telford College. The development of articulation agreements with colleges through the Edinburgh, Lothians, Borders, and Fife Regional Articulation Hub is being explored as a means of stimulating growth in direct entry applications.

7 The School supports three externally-facing research centres and two research groups made up of relevant staff from each of its four subject groups. In the 2008 Research Assessment Exercise 31 staff were entered under two units of assessment, Allied Health Professions and Studies and Earth Systems and Environmental Sciences which resulted in 15 percent of the School's research being rated as world leading or internationally excellent, with 57.5 percent being rated as of an international standard.

8 The School is currently preparing for two major challenges to be implemented during the next 12 months which will affect all of its activities. Firstly, the School has started the process of merging with the current School of Health and Social Sciences to form a new school and secondly the new school will move to the University's new Sighthill Campus in January 2011. The Panel noted that both challenges were being managed by the School in a typically positive and proactive manner which will undoubtedly help to ensure that students and staff are not adversely affected by the merger or the move.

The academic standard of the programmes included within the scope of the review.

9 The provision in all four subject groups is effectively managed by the School and the academic standards set continue to meet subject, University and sector expectations.

Mechanisms are in place to ensure that the curriculum is relevant and current and influenced by staff research interests. The provision is delivered using a variety of relevant learning, teaching and assessment approaches. The School has in place robust mechanisms for ensuring assessments are fair and reliable and take full account of University expectations. The sample of external examiner reports scrutinised by the Panel consistently report satisfaction with the range and rigour of assessment methods employed across the School's provision.

10 The introduction of the 20-credit modular scheme provided the School with the opportunity to review and update the curriculum across its provision. A clear decision was made to retain and develop elements of the curriculum which were recognised as enhancing graduate attributes. As an example, the final year of the biological sciences suite has always included a 60-credit research project which is completed in the second trimester and this has now been introduced to the sport and exercise science suite. The School believes that this provides students with an opportunity to develop skills relevant to their subject area and therefore their future employability but recognises that the growing number of students studying a bachelor's degree with honours is putting pressure on equipment and laboratory availability and budgetary resources. The Panel noted that the School has discussed whether alternatives to the current compulsory research project for students studying a bachelor's degree with honours should be introduced and recommend that the School continues to explore the feasibility of this. For example, the introduction of an SCQF level 10 60-credit dissertation to be offered alongside the existing research project might be attractive to students wishing to pursue a scholarly career.

11 During discussions the Panel suggested that the School's decision to discontinue accreditation of the biomedical sciences provision with the Institute of Biomedical Sciences could be regarded as unusual. Staff provided a sound rationale for this decision based on feedback from employers and former students and on the School's existing resources and future aspirations. However, the Panel suggested that the School should keep this decision under review with a view to ensuring that its students are not disadvantaged because their awards do not carry professional body accreditation or recognition.

The quality of the learning opportunities and the learning experience provided to students on the programmes included within the scope of the review.

12 In its critical reflection the School claimed a long history of delivering a quality learning experience to students which is rich in the development of practical and research skills. Discussions with staff and students enabled the Panel to support this view. The School has invested in excellent teaching laboratory facilities in which, for all suites, students have a large number of practical hours delivered. The Panel commended the School for providing first year students with an appropriate mix of separate theory and practice modules which provide students with applied scientific and employability skills. The move in the second year to merged modules assists students to develop their scientific skills in preparation for their research project.

13 The Panel found that the range of learning, teaching and assessment methods employed by staff reflected the flexible and forward thinking nature of teaching staff in all four subject areas. Clear evidence was provided to indicate that students are at the centre of the learning process and the enthusiasm and professionalism of staff help to ensure that students are provided with a positive and proactive learning experience. Teaching is informed by current and relevant applied research which is greatly appreciated and valued by students. Research, scholarly and consultancy activities undertaken by staff and an appropriate level of engagement with a number of professional bodies help to ensure that

the provision remains relevant and up-to-date and produces employable graduates. Students commended the School for providing a supportive and enjoyable learning environment.

14 The integration of research students into the wider school through delivery of demonstrations and other activities is an example of good practice. The Panel found that this has contributed to the development of the research students' individual skill base while providing role models for undergraduate students with research aspirations of their own.

15 The School firmly believes that its approach to assessing employability skills is an integral part of the student learning experience. Students have access to a wide range of embedded employability skills which are assessed using a diverse range of often innovative assessments designed to encourage students to develop their skills. For example, the sample of student work included examples of students having prepared business case bids to enable them to be allocated to their chosen research project topic. Similarly, biology students are asked to role-play the part of a guide during visits to museums as this enables their subject specific knowledge and their presentational skills to be assessed in a realistic working environment. All four subject areas employ an appropriate range and variety of assessment methods which have been designed to develop students' employability skills.

16 National Student Survey results indicate that the School scored an average of 12 points higher in the assessment feedback questions than the University average. The School believes that this achievement reflects a long standing emphasis on feedback which is underpinned by School-based research, along with the development of novel approaches for the provision of feedback such as the use of audio feedback sent via email. However, the Panel noted that the School is not complacent and continues to refine and improve its feedback practice. A recent consultation exercise on feedback helped to develop and refine the School feedback action plan, which has identified two key areas which are currently being developed and piloted: the use of exemplars; and, 'feedback prompts' where students are asked to name two matters they would specifically like feedback on.

17 The Panel commended the School for range of assessment feedback mechanisms in place which take full account of the University's Student Charter expectations. Students confirmed that they are provided with appropriate and timely feedback on their assessed work which enables them to improve their future learning. However, students also indicated that the good practice in some areas is not consistently applied to all students in all subject groups and the scrutiny of the sample of student work confirmed this. The School acknowledged this matter in its critical reflection and during discussions. The Panel encourages the School to continue to monitor the provision of assessment feedback to students to ensure that it is available to all students on a consistent and equitable basis.

18 The School has a long-established record of providing effective academic and pastoral support to its students and the Panel was pleased to confirm that this remains the case. An example of good practice in the provision of academic support is first-year biological sciences students without a firm background in biology being offered additional tutorials to assist them in their learning. Similarly, specific case-by-case pastoral support is available for students with special needs and for students articulating from further education. Students who have taken advantage of pastoral support mechanisms commented extremely favourably and mentioned that they appreciated being treated as individuals when approaching School staff for advice and guidance.

19 Part-time undergraduate students follow a pattern of study which is negotiated individually to take account of any time constraints that might affect their ability to attend University. Part-time students follow the same timetable as their full-time colleagues but only take one or two modules in any trimester. Discussions with part-time students indicated that they appreciated the flexibility offered by this approach to programme design. Staff are fully aware of the changing market requirements in relation to part-time provision and are engaged with University discussions relating to the part-time student learning experience. For example, building on the success of the part-time provision being delivered in Hong Kong, the School has been exploring the feasibility of developing targeted continuing professional development provision for delivery on-line.

20 However, the School is fully aware that it needs to be more effective in providing consistent and equitable support to its part-time students and that future developments of part-time provision will require to be prioritised alongside other resource matters. The Panel recommends that the School continues to monitor the effectiveness of the part-time student learning experience and to continue its participation in University discussions relating to part-time study.

The effectiveness of the systems implemented by the School to manage the quality and standard of its provision.

21 In common with University practice the School's committee structure includes a Learning, Teaching and Assessment Committee, a Quality Committee, Boards of Studies and Boards of Examiners. All four subject groups have appropriate representation on all committees and student representatives are full members of all committees except Boards of Examiners. The Convenors of the Learning, Teaching and Assessment and Quality Committees represent the School on the corresponding University and Faculty of Health, Life and Social Sciences committees and liaise closely with the Depute Faculty Manager and the Associate Dean (Academic Quality and Customer Service) on a wide range of matters relating to maintaining academic standards and enhancing the quality of the student learning experience.

22 All four subject groups take account of and fully engage with the University's Quality Framework: Procedures as a means of approving, monitoring and reviewing their provision. Definitive versions of module descriptors and programme specifications which the Panel confirmed met University expectations are held at school and faculty-level respectively. External panel members commended the University on the design of the module descriptor whereby all learning outcomes are clearly mapped to an assessment instrument.

23 All modules and programmes of study scrutinised during this review have been approved during the University's move to a 20-credit modular structure and are subject to annual review and monitoring in accordance with University procedures. Curriculum design was informed by University, faculty and school strategic plans, Scottish Credit and Qualifications Framework (SCQF) expectations and relevant subject benchmark statements. In addition, the Panel noted that the School intends to undertake a comprehensive review of its entire 20-credit provision following two complete delivery cycles to ensure that it continues to provide a coherent and appropriate learning experience for all of its students at SCQF levels 7 to 11. This example of forward planning provides further evidence of the School's enhancement-led ethos and quality culture.

24 The School's critical reflection noted that while the School was one of the first in the University to operate an effective system to review the effectiveness of its teaching delivery that this system now applied to new staff as part of their mentoring process. During discussions it was generally agreed that a system of peer review of teaching is only one of many mechanisms to monitor the effectiveness of teaching delivery which could also include team teaching and mutual monitoring of colleagues' teaching within and across subject or programme teams. The Panel noted the School's intention to continue to explore whether the re-introduction of a formal system of peer review of teaching delivery would be of benefit to the School's existing quality enhancement activities.

The effectiveness of the school's engagement with University and faculty policy, procedures and strategies.

25 The Panel noted that the School liaises closely with other subject and professional service areas through a variety of formal and informal mechanisms at appropriate points throughout the academic year. The scrutiny of supporting evidence indicated that Napier University Library Information Services and Computing and Information Technology Services staff are appropriately involved during the planning and development of new provision. Similarly, the School has established close links with Student Support Services to ensure that students are provided with effective advice and guidance when required. Colleagues from the mathematics and statistics subject group in the School of Accounting, Economics and Statistics provide tutorials as part of practical biology modules to support and reinforce the learning delivered through the practical laboratory sessions.

26 The Panel commended the School for its proactive and multi-strand approach to internationalising its curriculum. The combination of the experience gained from delivering programmes in partnership with HKU-SPACE in Hong Kong, a need to develop appropriate case studies to meet the needs of international students studying on Edinburgh-based programmes and the provision of research-driven overseas field trips have made a valuable contribution to the Faculty's drive to deliver an international curriculum.

27 The School provided evidence to indicate that staff are fully engaged in a wide range of University initiatives and have contributed fully to consultation and discussion on the development of the University's Academic and Learning, Teaching and Assessment Strategies. School staff are actively involved in the activities of Academic Board and its sub-committees. The lead role taken by the School's Teaching Fellows in assisting colleagues to engage with a variety of University initiatives was noted as an example of good practice.

28 However, the School acknowledged that it was disappointed with the outcome of a University-led survey of student awareness of the personal development tutor scheme. Students are provided with information on the School's implementation of the scheme during Week 1 of each trimester. The School believes that students' lack of understanding of the University's personal development tutor scheme may be due in part to the proactive approach taken by the School to implement it. A filtering system was developed and implemented to identify those students who may have required assistance through personal development tutoring. Monitoring student attendance was cited as an example of how students might be identified. This approach was adopted as the School's previous experience of operating a similar system based around year tutors had proved to be more effective than a programme of timetabled individual student tutorials. The School acknowledged that providing students with information on the personal development tutor scheme at regular intervals throughout the trimester might assist in raising awareness

across the School. However, as a result of the University-led survey the School has instigated a review of its operation of the personal development tutor scheme and the Panel encourages the School to complete this work and share its findings with a view to enhancing the University-wide system.

The effectiveness of mechanisms for encouraging student engagement with quality processes and with activities designed to enhance the learning experience.

29 The School firmly believes that student engagement requires inspiring, challenging and effective learning. The Panel confirmed that this belief is embedded across all four subject areas and found several examples of innovative teaching activities which have been designed to enhance the learning experience. For example, national recognition has been received from the Higher Education Academy for a module with large class sizes which demonstrates student interaction and motivation through successfully incorporating the Turning Point® system into lectures. The system allows increased interaction with the students during the lecture in terms of question and answer sessions, quizzes, or even gaining anonymous feedback from students. Other technology in use to support learning includes Elluminate Live!, podcasting, online lectures and Skype.

30 In commending the innovative use of learning technology to support teaching and engage students with their learning the Panel noted that the School is monitoring its use of technology to ensure that it remains balanced and appropriate to the teaching and does not cause disruption. The School intends to evaluate the use of technology as a means of engaging students in their learning with a view to developing good practice guidelines and the Panel encourages the School to continue with this work.

31 The School encouraged students to comment on their critical reflection before the visit to the School and written comments from students formed part of the evidence base scrutinised by the Panel. The Panel commended the School for this example of good practice to encourage students to engage with processes to enhance the quality of their learning experience. In addition, the Panel noted the positive and supportive comments made by students both as a result of this consultation and during meetings with the Panel which enabled them to confirm that the School has in place effective mechanisms for encouraging student engagement with quality processes.

The effectiveness of staff engagement with subject-specific or pedagogic research and knowledge transfer activities, and with other personal and professional development activities.

32 The Panel found that all staff within the School are fully committed to providing their students with an effective learning experience. The close team-working ethos between academic, technical and administrative staff was evident to the Panel and commented on favourably by students. The School's claim to be fully committed to recognising, supporting and rewarding excellence in teaching and learning and promoting the sharing of good practice and the development of staff expertise through teaching, scholarship, research, and public engagement was supported and endorsed by the Panel.

33 The School Learning, Teaching and Assessment Committee provides a focus for sharing, exploring and developing subject specific and pedagogic ideas and initiatives. In particular the annual conference arranged by the Committee facilitates sharing of School-based innovation and provides a forum for discussion and opportunities for staff development. Additionally, staff participate in and run a wide range of faculty and University-wide development events, which have included presentations to University staff

conferences, and more widely through publishing pedagogical research based on School practice. The Panel found that the School provides a high-level of support for staff development activities in support of excellence in learning, teaching and assessment. For example, the School is exploring the feasibility of identifying a named individual with potential for the role of disseminating good practice and perhaps even organising training in the use of new learning, teaching and assessment approaches.

Provision included within the scope of the review

- 1 Undergraduate programmes:
 - a) BSc (Hons) Animal Biology
 - b) BSc (Hons) Biological Sciences
 - c) BSc (Hons) Biomedical Science
 - d) BSc (Hons) Ecotourism
 - e) BSc (Hons) Environmental Biology
 - f) BSc (Hons) Forensic Biology
 - g) BSc (Hons) Herbal Medicine
 - h) BSc (Hons) Immunology and Toxicology
 - i) BSc (Hons) Marine and Freshwater Biology
 - j) BSc (Hons) Microbiology and Biotechnology
 - k) BSc (Hons) Sport and Exercise Science
 - l) BSc (Hons) Sport and Exercise Science (Sports Coaching)
 - m) BSc (Hons) Sport and Exercise Science (Sports Injuries)
 - n) BSc (Hons) Sport and Exercise Science (Exercise Physiology)
 - o) BSc (Hons) Sport and Exercise Science (Sport Psychology)
 - p) BSc(Hons) Flexible Managed Programme (Life Sciences).

- 2 Undergraduate programmes delivered in collaboration with a partner organisation:
 - a) BSc Biological Sciences (Hong Kong)
 - b) BSc (Hons) Sport and Exercise Science (Telford)
 - c) BSc (Hons) Sport and Exercise Science (Sports Coaching) (Telford)
 - d) BSc (Hons) Sport and Exercise Science (Sports Injuries) (Telford)

- 3 Taught master's programmes:
 - a) MSc Aquatic Ecosystem Management
 - b) MSc Biomedical Science
 - c) MSc Biotechnology
 - d) MSc Conservation and Management of Protected Areas
 - e) MSc Drug Design and Biomedical Science
 - f) MSc Ecotourism
 - g) MSc Pharmaceutical Science
 - h) MSc Sport Performance Enhancement
 - i) MSc Wildlife Biology and Conservation
 - j) MSc Flexible Managed Programme.

- 4 Taught master's programmes delivered in collaboration with a partner organisation:
 - a) MSc Biomedical Science (Biotechnology) (Hong Kong)

| School enhancement plan: School of Life Sciences, December 2009 | | | | | | |
|--|--|-------------|---|---|---|------------|
| Good practice | | | | | | |
| | Action to be taken | Target date | Action by | Success indicators | Reported to | Evaluation |
| The flexibility provided by the suite approach to curricular design contributes to the enhancement of the students' learning experience as it enables students to specialise in a chosen field or to change their direction of study at set points without compromising the integrity of their final award. The suite approach and the resultant sharing of teaching across modules is also an efficient use of learning and teaching resource (paragraphs 3 and 4). | Continue to deliver undergraduate and taught postgraduate programmes within a suite framework. | Indefinite | Subject Group Leaders and Programme Leaders | Students remain appreciative of the flexibility offered by the suite approach. | Head of School and School Management Team | |
| Providing first year students with an appropriate mix of separate theory and practice modules which provide students with applied scientific and employability skills. The move in the second year to merged modules assists students to develop their scientific skills in preparation for their research project (paragraph 12). | Continue to deliver Practical Biology modules to year 1 Biology students. | Indefinite | Subject Group Leaders and Programme Leaders | Year 4 students continue to demonstrate well-developed skills in their Honours projects | School/Faculty LTA and QC | |

| Good practice | | | | | | |
|--|--|--------------------|--|---|---|-------------------|
| | Action to be taken | Target date | Action by | Success indicators | Reported to | Evaluation |
| The integration of research students into the wider school through delivery of demonstrations and other activities contributes to the development of the research students' individual skill base while providing role models for undergraduate students with research aspirations of their own (paragraph 14). | Continue to provide opportunities and support for research students to be involved in teaching/demonstrating | Indefinite | Module Leaders and Subject Group Leaders | Opportunities are available to all research students | Head of School and School Management Team | |
| The provision of academic support to first-year biological sciences students without a firm background in biology through additional tutorials to assist them in their learning (paragraph 18). | Continue to identify at-risk students who would benefit from Biology Plus. Encourage more of these students to attend. | Indefinite | Programme Leader | Improved take-up of the course from the identified students. Retention of the at-risk students is at least as good for the rest of the students. | School/Faculty Joint LTA and QC | |
| The School's proactive and multi-strand approach to internationalising its curriculum which includes combining the experience gained from delivering programmes in partnership with HKU-SPACE in Hong Kong, the development of appropriate case studies to meet the needs of international students studying on Edinburgh-based programmes and the provision of research-driven overseas field trips (paragraph 26). | Continue to further internationalise teaching by learning from historical collaborative provision in Hong Kong and also new provision attracting large numbers of Indian students. | Indefinite | Module Leaders and Programme Leaders | Examples of good practice are identified and shared. | School/Faculty Joint LTA and QC | |

| Good practice | | | | | | |
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| | Action to be taken | Target date | Action by | Success indicators | Reported to | Evaluation |
| The lead role taken by the School's Teaching Fellows in assisting colleagues to engage with a variety of University initiatives (paragraph 27). | Teaching Fellows, in partnership with Academic Development, to continue to encourage engagement in University initiatives, including more staff applying for teaching Fellowships. | Indefinite | School Teaching Fellows | Increased numbers of colleagues involved. | School/Faculty Joint LTA and QC | |
| Encouraging students to comment on their critical reflection before the visit to the School and including written comments from students as part of the evidence base scrutinised by the Panel which encouraged students to engage with processes to enhance the quality of their learning experience (paragraph 31). | Continue to fully involve students in all aspects of the quality enhancement process. | Indefinite | Director (QC) | Student reps continue to be actively involved in appropriate committees. Student feedback/opinion is sought and acted on in dealing with learning experience issues. | School/Faculty Joint LTA and QC | |
| The high level of support for staff development activities in support of excellence in learning, teaching and assessment (paragraphs 31 and 32). | School LTA to continue to organise an annual LTA conference. A colleague to be given a role in the dissemination of good practice in LTA activities. | Indefinite 2010/11 | Director (LTA) Subject Group Leaders | Increasing number of attendees. Increasing number of colleagues engage with innovative LTA approaches, where appropriate. | School/Faculty Joint LTA and QC | |

| Recommendations | | | | | | |
|--|--|---|--|--|---------------------------------|-------------------|
| It is recommended that the School: | Action to be taken | Target date | Action by | Success indicators | Reported to | Evaluation |
| continues to explore whether alternatives to the current compulsory research project for students studying a bachelor's degree with honours should be introduced, for example, introducing an SCQF level 10 60-credit dissertation to be offered alongside the existing research project might be attractive to students wishing to pursue a scholarly career (paragraph 10) | School LTA to produce a consultation paper to be discussed by SMT, academic staff, and student reps. | 2011/12 | Director (LTA) | The consultation process results in a decision to either allow a library-based dissertation or to continue to only allow projects involving data generation and analysis | School/Faculty Joint LTA and QC | |
| continues to review the decision to discontinue accreditation of the biomedical sciences provision with the Institute of Biomedical Sciences with a view to ensuring that its students are not disadvantaged because their awards do not carry professional body accreditation or recognition (paragraph 11) | Monitoring of student applications and enrolments to BMS. Monitoring of career destinations of graduates. Canvas views of current students and recent graduates to determine if they feel disadvantaged. | 2010/11 for 3 years 2010/11 for 3 years 2011/12 | Subject Group Leader (BMS) and Director (QC) | Applications and enrolments do not decrease. Graduates gain suitable employment and are satisfied with their career development. Current students and recent graduates confirm their satisfaction with the course. | School/Faculty Joint LTA and QC | |
| continues to monitor the provision of assessment feedback to students to ensure that it is available to all students on a consistent and equitable basis (paragraphs 14 and 17) | School QC to audit feedback practice across the school | 2011/12 | Director (QC) | Results of audit allow targeted support of colleagues whose provision of feedback is not consistent with the best practice within the school. | School/Faculty Joint LTA and QC | |

| Recommendations | | | | | | |
|--|---|--------------------|-----------------------|--|---|-------------------|
| It is recommended that the School: | Action to be taken | Target date | Action by | Success indicators | Reported to | Evaluation |
| continues to monitor the effectiveness of the part-time student learning experience and to continue its participation in University discussions relating to part-time study (paragraphs 19 and 20) | Guidelines to be developed for the support of part-time students by programme leaders, module leaders, and PDTs. Effectiveness of these guidelines to be evaluated after 12 months. | 2010/11 | Director (SE) | Levels of support and communication with part-time students is the same as for full-time students. | School/Faculty Joint LTA and QC | |
| completes a review of its operation of the personal development tutor scheme and shares its findings with a view to enhancing the University-wide system (paragraph 28) | An audit to be carried out of the PDT scheme operated within the school. This will evaluate how consistently the scheme is implemented and also determine staff and student experience of the scheme. | 2011/12 | Director (SE) | Strengths and weaknesses of the scheme as well as consistency of implementation are identified. Any necessary changes result in improved student satisfaction/retention | Head of School and School Management Team | |
| continues to evaluate the use of technology as a means of engaging students in their learning with a view to developing good practice guidelines (paragraph 30) | A colleague to be given a role in the dissemination of good practice in LTA activities (see above). Guidelines to be developed in alignment to the MLE Action Plan. Evaluation of the impact on teaching practice to be undertaken 12 months after start of the role. | 2010/11 | Subject Group Leaders | Colleagues across the school are made aware of the potential of innovative technologies and explore what value they could add to their own LTA practice. Audit points to increased application of good practice. | School/Faculty Joint LTA and QC | |