

ANNUAL PROGRAMME* REVIEW

This form should be completed either for a single programme or for a cognate group of programmes that share several courses. To be completed by the programme director/leader and subsequently considered by the primary School Teaching and Learning forum.

- Part A should provide a review of the courses that make up the programme/group of programmes covered by this APR
- Part B should focus on the programme (or cognate group of programmes if appropriate)
- Part C should be completed if the programme is part of any Collaborative Provision with other Institutions/organisations where students are involved. If Schools wish, they can complete a separate APR for collaborative provision.

SCHOOL INFORMATION:		
School: Biological Sciences	Programme/cognate group of programmes: Animal Behaviour, Biological Sciences, Biology, Conservation & Ecology, Environmental and Plant Science, Marine Biology, Zoology	Academic year: 2023-2024
A. ANALYSIS OF THE PROGRAMME'S CONSTITUENT COURSES		
<p>1. Comment on the pass rates and grade profiles for courses within the programme. Identify outlier courses, i.e. those performing better or worse than others. What can be learned from these to help other courses within the programme? Comment on courses with less than average pass rates. What actions are planned to address the low pass rates? Actions could include, for example, changes to previous year's courses to better prepare the students or inclusion of more formative assessments.</p>		
<p>As the boxplot (figure 1a – first term courses, 1b – second term courses) below indicates, pass rates for the SBS UG courses were consistent with previous years and relatively high (90% or better).</p> <p>Although there were a number of fails in BI1511 Ecology and Environmental Science, the fail rate was lower this year (5%) than the two previous years (13%, 12.5%), potentially due to an increase in the consistency of messaging around attendance and monitoring which resulted in better attendance at lectures overall.</p> <p>The fail rate for BI2524 Comparative Physiology 1 increased from 3.9% to 7.6%, but the greater change was the distribution of the pass grades with many more students achieving a third class grade and many fewer receiving a 2.i grade (see figure 2; note the course data from 2022 are not included as the course ran under a different code that year). The rigour of the assessments was enhanced this year by changing the nature of the assessment of the practicals – an exam replaced a series of small written assignments. We are pleased with the success of the change in terms of reducing staff workloads and for discriminating student performance.</p> <p>The pass rate for BI3010 Statistical Analysis of Biological Data dropped from 98.5% to 91% this year; the mean grade and proportion of A grades also dropped. We ran the course using R software this year which increased the challenge for some students. We also had a relatively large number of direct entry students who took longer to adjust to the mode of teaching and learning than the students progressing from our year 2. We introduced additional support tutorials but the uptake by students was limited. We will continue to explore ways to help students transition into the more challenging aspects of the third year, and the stats course in particular.</p> <p>Last year we highlighted concerns over the relatively low proportion of high grades in BI2020 Ecology (2% As) and invested in providing more structured support sessions to prepare them for the problem-solving questions in the exam. The change resulted in an improvement in the mean grade (from 12.8 to 13.8) but did not substantially increase the proportion of students completing the course in the A band (3%). The results from BI2023 Introduction to Genetics were quite similar to BI2020 in terms of pass rate, average grade and proportion of As. Both of these courses are challenging in that they introduce new assessment types. We are supportive of the training that the assessments are providing for the students but we will reflect on how we can support the students capable of high grades to achieve them.</p> <p>Last year we also highlighted EK3301 Population Ecology for standing out as a course with a relatively low proportion of A grades. Additional support materials were developed for the practicals but student performance</p>		

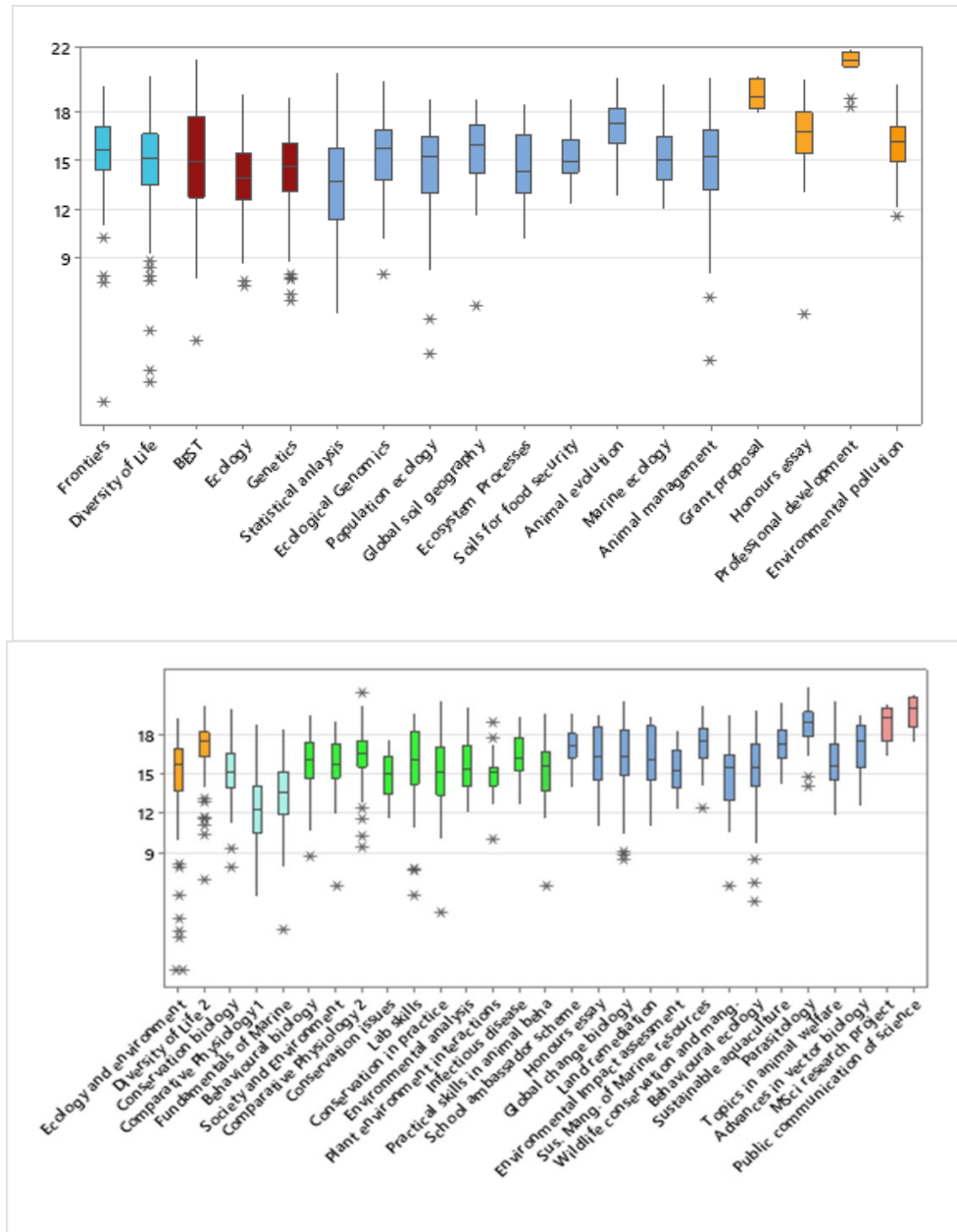
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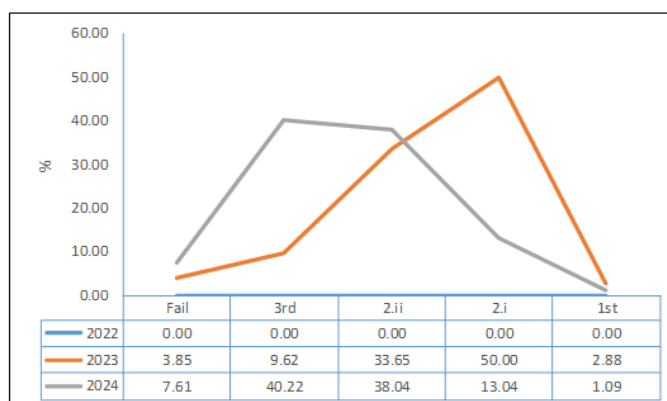
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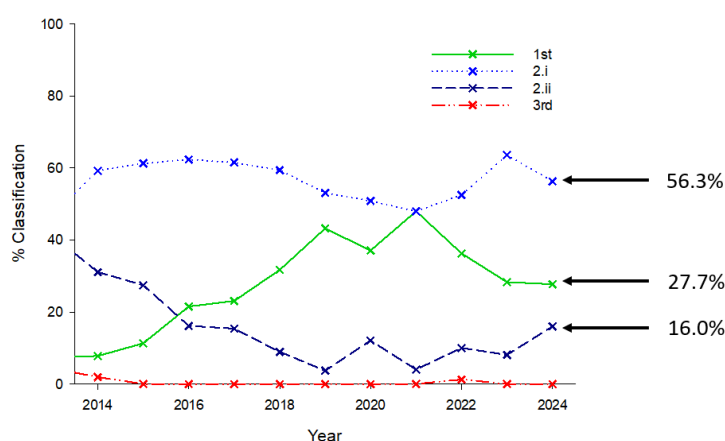


Course code	BI2524
Course name	COMPARATIVE PHYSIOLOGY 1
Number of students	92
Pass rate (%)	92.39
1st & 2.i (%)	14.13



Percentage of grades within each classification for the last 3 years

Classifications



ABERDEEN 2040

2. Comment on courses that are causing concern. Please include courses where concerns have been raised by staff or students at SSLC meetings or by external examiners. What measures could be put in place to address the concerns raised?

After reviewing the minutes from the SSLC meetings, Course Feedback Forms (CFF) and Annual Course Reviews, a small number of courses were identified as causing concern. Our return rate for CFF tends to be poor (averages are Y1 29%, Y2 24%, Y3 28%, Y4 30%). Of our 44 undergraduate courses (excluding field courses), 8 had return rates below 20% (see attached heat map).

Using only the CFF where return rates were $\geq 20\%$ and $n \geq 10$, and where any single question received a percentage agreement score of $< 60\%$, only one course was identified as problematic: BI3010 Statistical Analysis of Biological Data. The lowest scores on the CFF related to the questions: did you enjoy the course; and, staff made the subject interesting. Despite the majority of SBS students acknowledging the importance of quantitative skills to their disciplines, they do not enjoy learning and practicing statistics. The lectures and workshops will be revamped for AY24-25 with a view to reducing the jargon and bringing in more variety in the examples used.

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BI1511 Ecology and Environmental Science received negative feedback on many components of the CFF however the feedback from the class reps at the SSLC was positive. From the comments on the CFF, it was clear that some of the lectures were not pitched at the right level (some too easy and some too complicated), and some lectures were uninteresting. It is unusual for this course to get such negative scores. Only 18% of the 142 students in the course completed the CFF and the feedback from the SSLC was more balanced and positive. From the ACR, the main action points for next year are: to create space for an additional lecture related to biogeochemical cycles to allow the instructor more time to cover the material; to revisit one of the group exercises to ensure the instructions are clear; to make the rubrics for all assessments available to students; and, to revisit the film discussion session to ensure there is sufficient time for discussion. In the SSLC students praised the practicals and the approachable staff. They made some recommendations in relation to specific lectures and activities.

BI3505 Behavioural Biology was generally well-received but there was a problem with one of the assessments in that the instructions on MyAberdeen were contradictory and the marking was conducted in a non-standard way. This was addressed by enlisting two independent markers who re-marked all of the group presentations. Feedback from the SSLC meeting focused on the quantitative assessment that required some coding in R. This assessment has been changed for the new academic year as the course team agreed it was not central to the learning outcomes for the course.

ZO3812 Applied Marine Biology, Fisheries & Aquaculture has received low scores on the CFF for several years running. The course was coordinated and delivered by different staff this year but some of the students long-standing concerns related to clarity of assessment criteria and sufficiency of feedback (in terms of quality or timeliness) have persisted. In the ACR the coordinator explains that rubrics were created from scratch this year which meant that some were released later than would be ideal this year but they are all now in place for next year. The scores for the teaching on the course, learning opportunities and overall enjoyment showed marked improvement. This is a course that includes a numerical component that students tend not to enjoy. Additional effort will be made to explain the relevance of the shell fishery exercise.

Unlike last year, ZO4540 and BI3507 were well-received this year across all of the CFF questions. ZO4540 Sustainable Management of Marine Resources was modified in a number of ways by the new coordinator. An unpopular glossary assignment was dropped and replaced with a 3-minute thesis presentation format which was popular and generated excellent work. The weightings of assessments was changed and the feedback on formative work was delivered by student peers rather than by staff. Large class size and inappropriate teaching accommodation was problematic. For BI3507 Society and Environment, a reduction in the number of assessments addressed the previous year's students' concerns about workload.

B. REVIEW OF THE PROGRAMME(S)

1. Critically review the programmes. For instance: Do they continue to meet the subject benchmark statements? How well do all constituent courses work together to provide the core knowledge required? Do they continue to attract and retain students?

We had our Internal Teaching Review in March 2024, therefore, the critical review of the programmes was completed as part of the ITR. That document is available to QAC. At this time (August 2024), there are no additional points to make here.

In November 2024, we will have a re-accreditation evaluation from the Royal Society of Biology. We are currently preparing the documentation required for that evaluation.

2. What actions have been taken forward this year considering the previous year's feedback from the Course and Programme Review process, External Examiners, Programme Advisory Boards Professional Statutory Body or ITR recommendations (if reviewed within the past 12 months)?

We recently received the final report from the panel for our ITR, however, there are a few of the action points that were identified in the discussions that have been taken forward.

AI use in teaching and assessments – we dedicated the afternoon of our Away Day in June to a discussion around AI with the aim of increasing staff's knowledge of the capacity of the tools, their usefulness and ethical considerations. We are a pilot school for the new institutional template for MyAberdeen which includes a section on assessments where guidance over what is acceptable in relation to AI will be specified. We are also incorporating an AI workshop and assessment in our Honours Essay courses this year to help our students develop a fuller understanding of the benefits and short-falls of the common GenAI tools. Our External Examiners have praised some of our assessments for their robustness against GenAI but they have also expressed some concerns over the vulnerability of others (ZO3309 essay, BI1511 exam). We are working with

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course coordinators and the Education Committee to ensure staff are aware of the issues and familiar with good practice.

Student experience with the STH (e.g., concerns about harsh lighting, lack of devices with overlays and conflicting instructions related to the use of paper in the practicals) were discussed at a meeting in July involving STH staff and SBS staff and a set of action points were agreed. The action points will be followed up early in the new academic year.

Supporting students on fieldwork – a meeting is in the diary for September to discuss the concerns raised by staff about supporting vulnerable students with the Dean for Student Support and Experience to ensure staff are confident in their ability to support student well-being during field courses.

A number of action points were generated from feedback from our External Examiners. In brief, these actions points are as follows:

Introduce anonymous marking where possible;
Support the transition to UoA for international, direct entry students;
Support greater understanding in students of the purpose of assessment, how assessments are marked, and how feedback can be utilised for future assignments;
Encourage the consistency in the feedback from staff to students on their drafts of the Honours project.

These actions will be prioritized for the upcoming academic year.

3. What is working well within the programme(s)? What is new/innovative?

A large part of the ITR Critical Analysis included a focus on good practice within our programmes. The points that were commended by the panel were as follows: the school's dedication to its students; diversity of assessments; administrative and technical staff; importance given to employability and field-based learning.

Rather than revisit the points developed in the ITR, we highlight innovations and strengths that were highlighted by students after March 2024.

a) at Course level

BI3507 Society and Environment – students appreciate the variety in the assessments for this course and would like to see more different types of assessments adopted across other courses. Students also like the flipped classroom approach that dedicated a large amount of class time to structured discussion.

BI3806 Conservation in Practice and ZO4541 – students appreciate courses that include field trips because they are interesting and useful in understanding the application of the theory learned in the classroom.

EV4802, ZO4540, ZO4541 and ZO4821 – guest speakers were well-received and students especially appreciated hearing from practitioners and experts in the topics that the course was covering.

b) at Programme level

Animal Behaviour and Animal Behaviour and Welfare – the incorporation of some behaviour related field skills in the second year field course strengthens the practical training provided by the programmes.

Biological Sciences – the inclusion of an advanced lab skills course (BI35F4) is working well to ensure students develop confidence in their abilities in the lab.

Biology – the breadth of course choices available to students on this degree programme is a strength.

Conservation Biology – some changes to the curriculum have been made to ensure it reflects current concerns in the discipline. For example, additional material has been introduced related to decolonizing conservation and local people and conservation.

Ecology – the field ecology skills course is delivering experience with a variety of techniques that are important to careers in environmental consultancy. The inclusion of training in QGIS and map-making is valued by the students.

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Environmental Science – new practicals and curriculum is being developed for the Ecosystem Processes course for the new academic in order to address a previous bias towards terrestrial ecology and a rather unpopular approach to the flipped classroom. The new curriculum will include a stronger focus on global cycles and will include a marine topic related to stable isotopes and food webs.

Marine Biology – a new international field course is being developed and, we hope, will run for the first time in AY24-25; the course will give students who would like it, an opportunity to gain a diving qualification and to dive on a tropical reef in Honduras.

Plant and Soil Science – the practical components of BI25P4 Plants, People and the Environment and PL3505 Plant-Environment Interactions, have been strengthened with further development of existing practicals. The experimental design element of PL3505 is providing training relevant to final year project work.

Zoology – a popular level 4 course, Advances in Vector Biology, was offered this academic year to ensure students had sufficient choice. Staff resignations just prior to the start of the academic year meant that we had to withdraw Marine Biodiversity which had been popular for zoology students. For the new academic year, a new course, One Health: interactions between livestock, wildlife, humans and disease will be introduced and will replace the long running and popular Parasitology course. The lead for the Parasitology course has resigned. Reformatting and remapping Comparative Physiology 1 curriculum in tandem with Comparative Physiology 2 has resulted in complimentary animal physiology teaching in levels 2 and 3 and leads well into courses at level 4.

4. What area(s) require, or are intended for, development in the next academic year and how do you intend to address them?

As mentioned in section 2 above, we have a number of action points that we will pursue that emerged from the ITR and some that relate to feedback from our External Examiners. There are other points that we have identified throughout this academic year that will be priorities for the upcoming year.

GenAI – we continue to review and modify assessments that we believe are vulnerable to GenAI. We will deliver a workshop for our fourth year students as part of BI4017/BI4517 to provide some training in the appropriate use and ethics of use of GenAI and are building in an assignment to ensure good engagement with the learning objectives. We anticipate following up on a staff development workshop from July with CAD to continue to develop staff capacity in relation to the issues arising.

Science Teaching Hub – as mentioned previously, we are working with the team in the STH to address student concerns about harsh lighting and accessibility of devices. Further, we will participate in discussions with the team and other users (lead by the DoEs) to ensure there is dialogue around concerns arising and more opportunities to share good practice.

Introduce anonymous marking where possible – we look forward to working with CAD to embed anonymous marking in our courses where possible. Concerns about process for dealing with extensions and non-submissions have been a constraint but we understand that there are improvements in Blackboard Ultra that can now facilitate anonymous marking more easily.

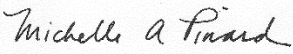
Support the transition to UoA for international, direct entry students – we are working with our partners at SDNU to construct a pre-sessional set of materials that students in Jinan can access prior to coming to Aberdeen for the start of their third year. We hope to have these materials in place by Dec 2025 when staff from the school will visit SDNU and the students on the first two years of the programme.

Support greater assessment literacy in students – we continue to receive low scores for assessment and feedback on the NSS and in some of our courses, despite investing in posting rubrics and assessment guidance. During the new academic year we will develop a coordinated plan to ensure that each year group is receiving some additional training in understanding how assessments are marked, how to use rubrics to ensure submissions meet the brief, and how moderation and feedback works to support future work.

Finally, our biggest challenge for delivering quality, rigorous UG programmes in the upcoming year is the impact of reduced staff numbers. We are addressing this challenge by reducing our course offerings, our course assessment loads, and changing some modes of delivery and marking to ensure we are as efficient as we can be and prioritizing activities in a sensible way. This review and evaluation will continue through the upcoming academic year.

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C. Review of Collaborative Provision (note that annual reporting for validated partners and TNE partners is more extensive and is described in the corresponding validation agreement. The following applies to non-validated and non-TNE partnerships only)		
1. Where applicable, list the Collaborative Provision agreements (Partnerships) that relate to this programme and the numbers of students involved (add rows as necessary)		
Partner Institution	Type of Partnership (see http://www.abdn.ac.uk/staffnet/teaching/types-of-partnership-3887.php)	Number of students involved
N/A		
2. Comment on the progress students admitted under each partnership have made in their programme and whether any changes to the programme, or arrangements with the partner, need to be made.		
NA		
3. For each partnership comment on any issues that have arisen as a result of the partnership and critically evaluate the success of the partnership.		
NA		
D. ISSUES TO BE RAISED AT SCHOOL OR UCTL LEVEL		
<p>Large computer classrooms – we continue to double, triple and quadruple teach our large statistics classes because the computer classrooms are too small. Invigilation of computer-based exams also requires multiple rooms and is often not possible because there is insufficient capacity to run an exam across enough rooms simultaneously. We support the development of a large capacity (150 PCs) computer classroom that could support these requirements.</p>		

Signed: ..  Date: ...16/08/2024.....
 (Chair, School /Discipline Teaching & Learning Committee)

Comments from Head of School*:

I confirm that I have read and agree with the content of this form and, where applicable, support the actions proposed.

Signed: Date:
 (Head of School*)

COPIES OF THIS FORM SHOULD BE:

1. CONSIDERED BY THE PRIMARY SCHOOL LEARNING AND TEACHING FORUM
2. UPLOADED TO THE [QUALITY AND PLANNING SHAREPOINT SITE](#) BY **31 AUGUST** FOR UNDERGRADUATE PROGRAMMES AND **30 NOVEMBER** FOR POSTGRADUATE TAUGHT PROGRAMMES

* Phase Co-ordinator for the MBChB curriculum; Interdisciplinary Degree Programme Co-ordinator, or Vice-Principal (Education) where appropriate.

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