Introduction

1. The Society of Biology welcomes the opportunity to respond to the Scottish Government's pre-legislative paper ‘Putting learners at the centre: Delivering our ambitions for post-16 education’ and supports the guiding principles expressed in the document, particularly the recognition of ‘the importance of the link between teaching and research in our universities’ (p12).

Improving the efficiency and effectiveness of the learner journey

2. We share the Government’s ambition to enable learners to progress without unnecessary duplication in educational experience, but we question the ability –and indeed the desirability - to enforce this through legislation. For example, what defines a “compelling academic argument” (para 45) to require the repetition of a qualification level? What common curricular elements would be sufficient to prove “clear academic links” or a “clear curricular fit”?

3. In the biological sciences, the breadth of the subject together with research-led teaching means that the biology departments of different institutions have distinctive ‘flavours’ (e.g. marine, biomedical, forensic), producing students with matched qualification levels but different knowledge bases. This is particularly marked between regions and may provide a “compelling academic argument” for the repetition of the level where there would be little repetition of content.

4. An unintended consequence of Curriculum for Excellence may be that students take fewer sciences at school level and would therefore benefit greatly from a broader 4-year degree covering the societal and ethical implications of scientific endeavour and an awareness of related subjects not delivered at school level. To guarantee articulation through statutory legislation runs counter to the rest of the document, which encourages diversity, interdisciplinarity and choice in the Higher Education system.

5. We would greatly welcome a refreshment of the higher national (HN) qualifications (para 46) to distinguish quality of achievement within qualification levels, a significant issue for articulation across regional boundaries.

6. A high-quality, well-supported Scottish Baccalaureate would be welcomed for advanced entry as it could significantly address the problem of an ‘incomplete year’ which currently leads to repetition of part of SCQF 7. While the interdisciplinary aspect of the Baccalaureate is seen as highly desirable, the ability to deliver that very different kind of education needs much more development for teachers to be able to support it.

7. In order to achieve the Government’s ambitions for the Curriculum for Excellence, CPD for teachers to teach the practical and research skills required for higher education is essential and needs
significant resource. In addition both teachers and students need access to decent research facilities, rarely found in schools. Universities could work in partnership with local schools to provide the training and the facilities but will need the resource and the recognition of time to do it.

8. **SCQF** is an extremely valuable framework in which a level of achievement can be easily recognised. However, it cannot distinguish the quality of achievement or the skills obtained within any individual qualification level. Accelerated progress on articulation with advanced standing is likely to need significant funding in terms of curriculum alignment across the different educational providers. This could usefully be done in partnership with the learned societies for example through the Society of Biology’s accreditation in the biosciences model.

9. The tendency for Universities to make offers on the basis of Highers, even for students taking Advanced Higher, mitigates against the effective use of SCQF in transition from college/school to university even for the very straightforward cases. It might be valuable to ask whether there should be more guidance or review on the time taken and achievement required in that time for the different SCQF levels, to clarify expectations for the majority in full time education, while the minority for whom longer time periods are needed, and those in part-time education can still benefit from the flexibility of the system.

**Widening access**

10. While we welcome the expansion of the *Regional Coherence* approach to other institutions (para 63), care needs to be taken to ensure that this does not result in the ‘channelling’ of local students rather than widening horizons and aspirations.

11. The Scottish educational system already has a wide range of access points to Further and Higher Education. We should be developing greater flexibility, recognising that different students are looking for different educational outcomes, all of which are of value to the nation, with a range of options in terms of time taken, and qualification outcomes, available to those who can benefit – it is the identification and support of those who will most benefit that is the challenge.

12. We welcome the development of Widening Access Outcome Agreements tailored to the local circumstances and sectoral needs of individual institutions (para 72). Such tailoring will maintain the diversity of the Scottish HE sector by allowing the delivery of different missions in different institutions.

**Maintaining Scotland as a global leader in university research**

13. There is a possible conflict between the desire to “maintain Scotland’s world leading position in university research” and the statement that “the university research we fund should be closely aligned with our national priorities” (para 92). This may be exacerbated where world class research means working in a global community, but much of the rhetoric is about local need. Research funding must be directed to the best research which in turn acts as a magnet for talent and investment and drives economic success.

14. The total number of PhD training positions is reducing. There is scope for exploring funding pools from Scottish businesses and industry to fund postgraduate research opportunities and also undergraduate student placements.

15. We do not see the value in creating a single Knowledge Exchange Office. Knowledge exchange is best done locally, and there are many examples (Dundee, Glasgow) which support this: the best
examples of successful knowledge exchange are where universities have forged direct links with industry, rather than worked through a distant office.

**Fair and affordable student support arrangements**

16. We are fully supportive of the Government’s commitment to continue to provide opportunities for Scottish students to study overseas (para 118) and to promote Scottish universities as a destination of learning choice for international students (para 119). The Scottish economy will only develop in a global context if we use all the resources of the world. We would welcome any initiative that enabled more of our students to gain overseas experience as part of their degree programme.

The Society of Biology is a single unified voice representing over 80,000 biologists from all walks of life through our individual and organisational members. We are committed to promoting biology as a subject of choice to students in schools, colleges and universities and recognise excellence in biology teaching to champion a biology curriculum that challenges students and encourages their passion for biology. We would be delighted to contribute further to this area as your policy evolves.

We are pleased for this response to be publicly available and will shortly place a version on [www.societyofbiology.org](http://www.societyofbiology.org). For any queries, please contact Dr Caroline Wallace, Society of Biology - Scotland, 22-26 George Street, Edinburgh EH2 2PQ; carolinewallace@societyofbiology.org
Member Organisations represented by the Society of Biology

Anatomical Society  Linnean Society
Association for the Study of Animal Behaviour  Marine Biological Association
Association of Applied Biologists  Nutrition Society
Biochemical Society  RNID
Breakspear Hospital  Royal Entomological Society
British Andrology Society  Royal Microscopical Society
British Association for Lung Research  Royal Society of Chemistry
British Association for Psychopharmacology  Science and Plants for Schools
British Bariatric Medical Society  Scottish Association for Marine Science
British Biophysical Society  Society for Applied Microbiology
British Crop Production Council  Society for Endocrinology
British Ecological Society  Society for Experimental Biology
British Lichen Society  Society for General Microbiology
British Microcirculation Society  Society for Reproduction and Fertility
British Mycological Society  Society for the Study of Human Biology
British Neuroscience Association  SCI Horticulture Group
British Pharmacological Society  The Physiological Society
British Phycological Society  UK Environmental Mutagen Society
British Society for Ecological Medicine  University Bioscience Managers’ Association
British Society for Immunology  Zoological Society of London
British Society for Matrix Biology  Supporting Member Organisations
British Society for Medical Mycology
British Society for Neuroendocrinology  Association of the British Pharmaceutical Industry (ABPI)
British Society for Plant Pathology  Association of Medical Research Charities
British Society for Proteome Research  AstraZeneca
British Society for Research on Ageing  BioScientifica Ltd
British Society for Soil Science  Biotechnology and Biological Sciences Research Council (BBSRC)
British Society of Animal Science  GlaxoSmithKline
British Toxicology Society  Institute of Physics
Experimental Psychology Society  Lifescan (Johnson and Johnson) Scotland Ltd
Fisheries Society of the British Isles  Medical Research Council (MRC)
Genetics Society  Pfizer UK
Heads of University Biological Sciences  Syngenta
Heads of University Centres of Biomedical Science  The British Library
Institute of Animal Technology  Wellcome Trust
International Biometric Society  Wiley Blackwell
Laboratory Animal Science Association