



# THE UNIVERSITY *of* EDINBURGH

## **College of Science and Engineering Learning and Teaching Strategy**

### **Overarching aims**

- A1. To deliver taught programmes of the highest academic quality and to be renowned within and outside the University as a source of innovation in learning and teaching.
- A2. To provide an excellent educational experience for all our students, supporting them to become highly effective learners, and equipping them with the skills required in their chosen discipline as well as those required for a wide range of intended careers.
- A3. To embed the principles and practice of scientific enterprise enabling all students to develop the intellectual and practical skills appropriate to their discipline.

### **Strategic principles to realise these aims**

- P1. A supportive, scholarly community of practice (A1, A2)
  - Within our academic community, we will promote the scholarship of learning, teaching and assessment, informing enhancements to our practice and evaluating effectiveness using evidence based approaches. Scholarship in teaching and learning will be supported by appropriate mechanisms of recognition and reward for innovation, leadership and excellence.
  - We will share effective practice between disciplines within and beyond the College, developing and strengthening links through the Institute for Academic Development (IAD) and within discipline networks beyond the University.
  - Key members of our community of practice are our students. They will play an active role in developments to our practices through consultation and discussion.

P2. Learning independently, collaboratively and with a spirit of enquiry (A2, A3)

- Our programmes should encourage students to become active constructors of their own knowledge and understanding, developing their autonomy and self-reliance rather than being passive recipients of received wisdom.
- Self-reflection, and the associated abilities necessary to critically evaluate one's own work, will prepare our graduates to be independent and effective life-long learners.
- Working collaboratively will be an essential skill for all our graduates, and their studies should provide opportunities and facilities, both formal and informal, to facilitate the development and refinement of requisite skills.
- Permeating throughout a student's learning experience should be the authentic spirit of enquiry by which our disciplines advance knowledge.
- The articulation between teaching and research should be promoted at all levels of our programmes and capitalised upon, illustrating knowledge advancement as a process of gradual synthesis of information from different sources and domains, not memorisation of facts.
- Our graduates should be capable of articulating and communicating a broad spectrum of complex ideas and issues and be able to discuss, debate and negotiate these, within and beyond the scientific community.

P3. Appropriate assessment, effective feedback (A1, A2)

- Our assessment practices should fairly evaluate both the domain-specific knowledge and expertise and the acquisition and development of a broad range of skills and competencies.
- We will be mindful of making necessary space in curricula to balance quality and quantity of learning, utilising a wide range of assessment strategies across our programmes.
- Feedback on assessed work will enable reflection on prior achievements and also feed forward for future assessments.
- Our courses will promote the value of formative assessment to students as a vital ingredient for learning.

P4. Learning in an international environment (A1, A2, A3)

- Our students will be encouraged to take advantage of the highly international environment at the University of Edinburgh, learning from staff and fellow students from diverse backgrounds.
- We will continue to develop opportunities for our students to spend time studying or working abroad and provide appropriate support to enable them to take full advantage of these opportunities.

## Targets

- T1. Building a more effective scholarly community of practice.
- All staff teaching on our courses are expected to perform to a high standard, with regard to delivery, assessment and feedback. Appropriate measures of teaching quality and effectiveness will be used to provide input to the Performance and Development Review and promotions processes.
  - We will further develop our interactions with the IAD, taking advantage of the wide range of activities associated with staff training and development and helping to shape future activities.
  - We will document and actively share effective practice more systematically. This will include themed workshops, more inter-School collaborations and establishing a College-wide teaching and learning 'knowledge base'.
  - Our community will involve a wide constituency, including postgraduate tutors and demonstrators, Principal's Career Development scholars, Post Docs and RAs contributing to the teaching programme. We will ensure that all those involved in teaching are given appropriate training and support.
- T2. A wider range of assessment practices to develop and assess relevant skills.
- Assessments should incorporate a broad range of formats appropriate to the discipline.
  - Where time-limited written assessments are utilised, we should make use of a more diverse range of formats, including open-book and / or take home exams.
  - We will continue to ensure that assessment regulations permit innovation in practice and will work to develop and refine the regulations where they do not.
- T3. A broader cohort base and experience (PG and UG, on-campus and off).
- We will continue to recruit talented and motivated students who can develop to their full academic potential whatever their personal, social and educational background.
  - We will continue to develop on-line learning as a significant element of our portfolio of teaching activities. We will build capacity in Online Distance Learning (ODL) while also developing opportunities for on-campus students to take advantage of on-line learning opportunities where appropriate.
  - We will explore additional joint international collaborations, e.g. 2+2 programmes.

T4. Continued development of the estate to support different modes of learning and teaching.

- Our teaching and learning estate encompasses both physical and virtual spaces. Both will be developed collaboratively, with appropriate sharing of innovative practice.
- We will evaluate the use of recently refurbished spaces, from the perspective of both staff and students, and use findings to inform future developments.
- We will help design appropriate facilities to enable the planned growth in student numbers without detriment to the student experience.