

# National standards for environment and sustainability learning and teaching at Australian universities

### Background:

Back in 2015 the Australian Council of Environmental Deans and Directors issued new Learning and Teaching Academic Standards for Environment and Sustainability, following an extensive nation-wide process of consultation. Apart from the standards themselves, this process consolidated emerging theory and practice in Australia and overseas.

There has since been an opportunity for Australian universities to analyze their program structures and course offerings to assess their alignment with the standards and to feed this analysis into teaching developments.

### Key matters raised in research - a summary

The standards were developed in consultation with nearly 1,000 academics, students, employers, and representatives of indigenous interests: From the website established to host the standards:

"The Learning and Teaching Academic Standards Statement for Environment and Sustainability has been developed by the environment and sustainability higher education community. This statement describes the minimum or threshold learning outcomes (TLOs) that graduates of tertiary programs in environment and Sustainability are expected to meet or exceed. The TLOs provide a curriculum reference point for designing and teaching diverse and innovative environment and sustainability programs. The TLOs are not intended to be prescriptive. The Australian Council of Environmental Deans and Directors (ACEDD) commissioned the development of the TLOs and ... endorses the threshold learning outcomes identified in this document as a curriculum reference point for program design, development and delivery in this field."

The new standards are applicable to both undergraduate and postgraduate levels of university teaching, and feature learning outcomes grouped into four 'domains':

1. Transdisciplinary knowledge – with focus on environments at various scales, interdependencies between human societies and environments, key sustainability challenges and their drivers; and holistic systems thinking and complexity.
2. Systemic understanding – fostering diverse approaches, understanding of different frameworks for knowing, appreciation of one's own and others' knowledge systems, and understanding of the particular values, knowledge, ethical positions and interests of indigenous peoples globally.
3. Skills for environment and sustainability – with focus on cognitive, technical and communication skills, critical thinking, ability to envisage research questions, and to apply relevant tools and theories; to work independently and collaboratively with diverse groups; and to engage with indigenous approaches.
4. Ethical practice – ability to reflect on and direct one's own learning and practice and to participate constructively and ethically in decision making.

(Note: the above summarises key elements within the standards, and is not the full scheme.)

Since the introduction of the standards:

- At least ten separate degree programs have already been revised to align with the standards in the short time since publication.
- In one example, the University of New South Wales is revising its Master of Environmental Management using the standards as reference for principles and ideas.
- Meanwhile, Macquarie University has revised its Master of Sustainable Development in line with the standards, blended with a competencies approach which incorporates systems-thinking, anticipatory (or futures thinking), strategic thinking, interpersonal competence and normative (ethical) competence.
- The standards are being used beyond their original intent. At the University of Melbourne, for instance, they are informing the sustainability strategic plan and the design of a sustainability course to be fully integrated into ALL degree programs.
- International impact: colleagues National Council for Science and the Environment's Council of Environmental Deans and Directors in the USA are collaborating on the potential for a similar process in USA.
- The Australian Council of Environmental Deans and Directors is scheduled to review progress with the standards at their meeting in November this year.

### **Who is it useful for?**

For educators both inside and outside the university sector, the explanatory discussion related to the standards makes for an interesting reference document, which conveys principles and priorities in teaching development within the Australian context. In its process and its outcomes, the project serves as a model that is attracting international attention.

### **Where can you find it?**

The National standards for environment and sustainability learning and teaching, along with explanatory notes and project description are at:

[https://environmentltas.gradschool.edu.au/uploads/content/drafts/ES\\_LTAS\\_Statement\\_Final.pdf](https://environmentltas.gradschool.edu.au/uploads/content/drafts/ES_LTAS_Statement_Final.pdf)

For review of the competencies approach, see Wiek, A., Withycombe, L. & Redman, C.L (2011) Key competencies in sustainability: a reference framework for academic program development. *Sustainability Science* 6:2 (203-218). <https://doi.org/10.1007/s11625-011-0132-6>

### **Submitted by**

Paul Brown: paul.brown@unsw.edu.au

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The development of the National Standards was undertaken by the School of Environmental and Life Sciences at the University of Newcastle. Team leaders were Bonnie McBain and Liam Phelan.