



THE UNIVERSITY OF  
MELBOURNE

Melbourne Centre for the  
Study of Higher Education

# EDUCATION FOR SUSTAINABLE DEVELOPMENT IN THE CURRICULUM

## FRAMEWORK TO GUIDE TEACHING AND LEARNING

Sophie Arkoudis, Chi Baik, Ani Wierenga, Kath Williams

### INTRODUCTION

Through Growing Esteem (2015) and the University's Sustainability Charter and Strategic Plan 2017-2020, the University of Melbourne has committed to embedding sustainability across all aspects of the University, including to 'inspire and support students to be leaders for a sustainable future'. This aspiration is also strongly reflected in University of Melbourne Graduate Attributes, especially the characteristics of Active Citizenship including: 'high regard for human rights, social inclusion, ethics and the environment' and 'capacity to, through advocacy and innovation, lead change for a sustainable future'.

This document presents a framework for how knowledge and values for sustainability can be practically incorporated in diverse curricula at the University of Melbourne. We draw on the internationally recognised Sustainable Development Goals to define sustainability in a way that is recognisable to people working in diverse professions and fields of study, and summarise the University of Melbourne's commitments to ensuring its graduates can contribute to these goals. We then present a list of high order learning outcomes that summarise knowledge and capacities required for graduates of the University of Melbourne who can lead for sustainable future.

## DEFINING EDUCATION FOR SUSTAINABLE DEVELOPMENT

The Sustainable Development Goals were adopted by Australia and many other countries under the leadership of the United Nations General Assembly (2015). These goals commit countries to end poverty, protect the planet, and ensure prosperity for all, with specific targets to be achieved over the next 15 years.

# SUSTAINABLE DEVELOPMENT GOALS



Within the Sustainability Plan, the University’s priority is to ensure that sustainability knowledge and values are embedded in all undergraduate degrees and major, with the aim of enabling education for sustainability to become part of the fabric of teaching and learning at the University of Melbourne. This is easier to establish in subjects that focus on sustainability as a content area, and interdisciplinary subjects.

The challenge lies in embedding sustainability knowledge and values in undergraduate degrees and majors, as some academics may struggle to see the relevance of sustainability to their particular degree program.

The University’s curriculum offerings include subjects that are specifically focused the topic of sustainability. The challenge lies in integrating sustainable development in existing curricula. In July 2017, an initial Cross Faculty Teaching and Learning Forum at the University discussed this challenge and provided inputs towards developing a set of Sustainability Learning Outcomes that that align with the University’s existing Graduate Attributes.

UoM graduate attributes	Sustainability learning outcomes
Academic distinction	Knowledge and integration
Integrity and self awareness	Act for positive change
Active citizenship	Anticipate and evaluate change

Unsurprisingly, some broader debates about the nature of education have become (and remain) an important part of the conversation: for example, whether graduate attributes should be aspirational or measurable as learning outcomes; whether to push toward individual outcomes vs social (shared) learning, whether hope and fear play a role in an academic education, and the role of advocacy in learning. These concerns reflect different academic perspectives that are important to discuss within degree programs. They are also vital topics of discussion that will go a long way to ensuring that cross – faculty offerings are holistic, full and as diverse as possible.

The table below presents a framework that define the sustainability learning outcomes and offer examples from various disciplinary contexts. These learning outcomes were informed by a workshop with academics from all faculties across the University, in which participants described the knowledge skills and values important to sustainable practice in their field. The learning outcomes can be used in conjunction with the Sustainable Development Goals to explore how sustainability intersects with diverse curricula, and so might be embedded in core and compulsory subjects through careful selection of disciplinary or professional concepts, choice of case studies for exploration and problem solving. The framework can also be used to evaluate how effectively sustainability is embedded in curricula across the University.

EDUCATION FOR SUSTAINABLE DEVELOPMENT		
Learning outcome	Explanation	Examples
<b>Knowledge and integration</b>	Deep and integrative knowledge of how the field of study relates to short and long-term welfare of environment and society	<ul style="list-style-type: none"> <li>• Management students draw from sociology and critical studies to identify how some business practices might cause harm to people or environments</li> <li>• Medical students draw on concepts from the multidisciplinary field of Ecohealth to understand the connections between physical environments and human health</li> <li>• Creative arts students study individual and societal responses to environmental challenges in various artistic media</li> </ul>
<b>Evaluate and anticipate change</b>	Capacity to utilise critical thinking to evaluate and anticipate the forces, dynamics and opportunities of social and environmental change	<ul style="list-style-type: none"> <li>• Public health students explain how understanding the social and environmental determinants of health influences local, national and global equity</li> <li>• Science students develop skills in estimation and exponentiation and apply these to anticipate future impacts of environmental change</li> </ul>
<b>Act for positive change</b>	Capacity to apply and promote environmentally and socially responsible practices in professional life and citizenship	<ul style="list-style-type: none"> <li>• Materials Conservation students demonstrate capacity to reduce consumption and reuse laboratory resources</li> <li>• Management students utilise corporate social responsibility frameworks to guide more ethical business practices</li> <li>• Creative arts students consider the sustainability implications of an international career alongside potential career benchmarks</li> <li>• Built environment students use knowledge derived from life cycle thinking to design and construct buildings with minimal resource use and that contribute to their surrounding ecosystems</li> </ul>



For general queries please contact:

**Professor Sophie Arkoudis**  
**s.arkoudis@unimelb.edu.au**  
**T: +61 3 8344 7434**