

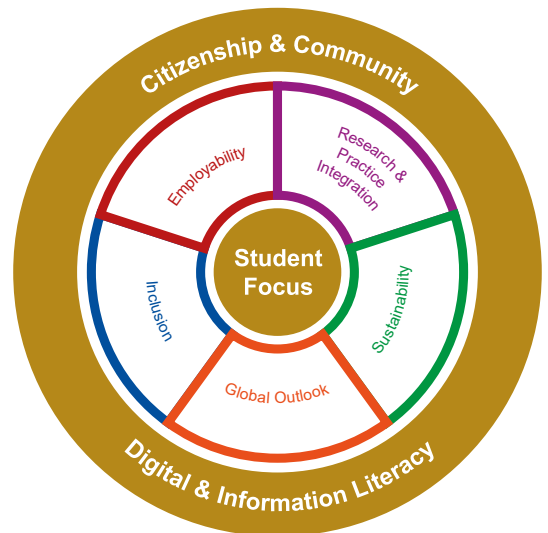
ENhance Quick Guides

Edinburgh Napier
UNIVERSITY

Department of
Learning & Teaching
Enhancement

Theme: Sustainability

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What is Sustainability in curricula?

Designing and creating a sustainable curriculum for students can look quite different depending on subject, learning outcomes and assessments.

The main outcomes and principles behind embedding sustainability into the curriculum are to ensure that students can acquire the **knowledge, skills, attitudes, and values necessary to help create a sustainable future**. This ethos is known as **Education for Sustainable Development (ESD)** and should involve the inclusion of key issues such as **poverty reduction, climate change and sustainable consumption** in learning and teaching (L&T), and in assessment tasks (formative and/or summative).

As well as introducing these key themes, L & T approaches should allow learners to develop and be equipped with the tools necessary for **behaviour change and taking action** for sustainable development where they can see themselves as global citizens. This can be introduced around key academic competencies and skills such as **critical thinking, collaborative decision making and addressing real-world issues** to help solve problems reflected in society today and in the future with climate change projections.

Why is Sustainability important in Learning & Teaching?

- In progression from [SCQF \(Scottish Credit & Qualification Framework\)](#) Level 7 to Level 11, consider transition from ESD basics to university alignment with the Scottish National

Performance Framework and integration of the [17 United Nations Sustainable Development Goals \(SDGs\)](#) in relation to module topics, tutorial activities and assessments. These are also frameworks to which Edinburgh Napier University's Environmental Sustainability Strategy seeks to respond.

- For students, it is important to have a clear understanding of sustainability as it relates to the context of the module, i.e., allow reflection of how concepts of sustainability relate to the module subject or particular topics. This does not require that all elements of [UNESCO's education sector response, 'Education for Sustainable Development'](#) on poverty reduction, climate change and sustainable consumption be met. However, sustainability learning should be joined up. Ideally the three pillars of sustainability (people, profit, and planet) should be connected in learning to develop systems-thinking and authentic sustainable outcomes.
- Making the subject real for the students means animation with real-world implications and consequences of unsustainable practices, as well as the potential solutions that align with the module learning outcomes.

How can you embed Sustainability in curricula?

1) Identifying Opportunities to Embed Sustainability:

- Once you have a grasp of sustainability's relevance to your subject, identify key areas within your module's curriculum where sustainability concepts can naturally fit.
- Look for topics, case studies, or practical applications that lend themselves to discussions about environmental impact, resource management, social responsibility, and ethical considerations.
- Offer connections to learners that demonstrate how sustainability is interconnected across various disciplines (in your programme area, and outside of this into other areas). By merging sustainability into existing content, you can demonstrate its real-world applicability.
- Consider introducing sustainability-focused assignments that encourage critical thinking and problem-solving, e.g., involving sustainable practices within your field, designing solutions to address environmental challenges, or exploring the social implications of certain approaches/practices.
- Practical, hands-on tasks (or case examples) are likely to engage students in active learning

experiences that foster a deeper understanding of sustainability principles.

- Consider opportunities to exercise and develop competencies as aligned to Education for Sustainable Development ([Embedding sustainability into your teaching and learning | Teaching & Learning - UCL – University College London](#))

Learning Objective Case Example: SOE10103 Business Strategy and Sustainable Development

Learning Outcomes for module:

1. To understand the concept of sustainable development
2. To appraise the key sustainability issues, and to assess the impact on business organisations
3. To assess the processes by which businesses can embed 'sustainable development' in their strategies
4. To evaluate how engagement with sustainability can be beneficial to businesses in terms of creating competitive advantage.
5. Assess the role of corporate social and environmental reporting ('social accounting') in contributing to the attainment of sustainability goals.

2) Embed Interactive Learning for Sustainability

Engaging students in meaningful discussions and activities is crucial for effectively integrating sustainability into your curriculum.

- Consider debates, group projects, case studies, and simulations that challenge students to think critically about sustainability issues within your field and in society, they can also bring in their own experiences and backgrounds to these activities.
- Offer opportunity for students to share their perspectives and insights, promoting a diverse range of viewpoints and enriching the learning environment. Padlet or other chat facilities could support this.
- Develop viewpoints through forum (face-to-face or online) and discussion (again, face-to-face or online)

- Invite guest speakers from relevant industries or organisations to share experience and insights as to how they created a resolution/solution/fix. Again, students need to see how this relates to the learning outcomes and assessment.
- Editing recordings of speakers to allow for Q&As that links to learning objective (and assessment if relevant).

Case example of SDG Goals as a context for learning activity subject

SOE07106 Academic Skills for Business Management

Week	Date	SDG Topic	Lecture Topic	Practical & Tutorial Activities
2	11 Sept	Introduction	Introduction	Tutorial: Mentimeter icebreaker quiz
3	18 Sept	Education	Trust What Data?	Practical: Sources of information
4	25 Sept	Gender Equality	Writing Effective Assignments	Tutorial: Group formation and essay review
5	2 Oct	Inequality	Quantitative Data 1	Practical: Excel and Data on Inequality
6	9 Oct	Health and Wellbeing 1	Effective Presentations	Tutorial: Presentation groupwork
7	16 Oct	Employability Skills Programme Week		
8	23 Oct	Health and Wellbeing 2	Quantitative Data 2	Tutorial: Presentations
9	30 Oct	Affordable & Clean Energy	Quantitative Data 3	Practical: Analysing data on UK energy
10	6 Nov	Climate Action	Qualitative Data 1	Tutorial: No Denying It podcast
11	13 Nov	Climate Action	Qualitative Data 2	Practical: Analysing Qualitative Data
12	20 Nov	Assignment Support Week	Assignment Guidance	Tutorial: Assignment Drop-In Support

3) Fostering Critical Thinking and Ethical Consideration

Sustainability education should encourage students to think critically and make informed decisions that consider poverty **reduction, climate change and sustainable development** (and moving towards **environmental, social, and economic implications** as stated in the **17 UN SDGs**)

- Dependent on year of study, foster critical thinking by presenting complex, open-ended questions that require students to analyse and synthesise information, and form positions from this.
- Encourage students to evaluate the trade-offs associated with different approaches, considering both short-term benefits and long-term consequences.
- Highlight the ethical dimensions of sustainability in your subject area.
- Discuss the moral responsibilities of professionals in your field and the ethical dilemmas they may be faced when balancing economic interests with societal and environmental well-being.
- Encourage students to reflect on their own values and the role they can play in promoting sustainable practices within their chosen careers.

Case Example

In the suite of modules serving the Marketing subject area there is an integration in all modules' topic themes to encourage critical thinking relating to sustainability. These includes gender equality, innovation and sustainability, veganism, recycling, carbon footprint, sustainable cities and communities, healthy eating, the ethics of fast fashion

4) Assessment and Continuous Improvement

- The final stage of integrating sustainability into your curriculum involves assessing student learning and continuously improving your approach.
- Design assessments that require students to apply sustainability concepts to real-world, societal examples.
- Evaluate their ability to analyse and propose solutions that align with sustainable principles.

- Design constructive feedback (relating to the three elements of sustainability and/or SDGs) that helps students refine their understanding of sustainability's application within your subject.
- Regularly review and update curriculum to ensure that sustainability content remains relevant and up-to-date.
- Seek input from colleagues, students, and external experts to gain different perspectives on the effectiveness of how sustainability is embedded.

For further information and tools to embed sustainability on your modules and programmes, please look at the following resources.

References and tools for further guidance

Buckley, J. B., & Michel, J. O. (2020). An Examination of Higher Education Institutional Level Learning Outcomes Related to Sustainability. *Innovative Higher Education*, 45(3), 201-217. <https://doi.org/10.1007/s10755-019-09493-7>

Cebrián, G (2018) The I3E model for embedding education for sustainability within higher education institutions. *Environmental Education Research*, 24 (2), 153-171.

Robinson, J., Ariga, A., Cameron, S., & Wang, R. (2022). Reaching the Rest: Embedding Sustainability in Undergraduate Student Learning. *Journal of Integrative Environmental Sciences*, 19(1), 171-187.

Sandri, O. (2022). What do we mean by 'pedagogy' in sustainability education? *Teaching in Higher Education*, 27(1), 114-129. <https://doi.org/10.1080/13562517.2019.1699528>

Winfield, F., & Ndlovu, T. (2019). "Future-proof your Degree": Embedding sustainability and employability at Nottingham Business School (NBS). *International Journal of Sustainability in Higher Education*, 20(8), 1329-1342.

Advance HE

- [Advance HE Practice Guides, www.advance-he.ac.uk/knowledge-hub/tags/practice-guides](http://www.advance-he.ac.uk/knowledge-hub/tags/practice-guides)
- [Education for Sustainable Development in Higher Education, www.advance-he.ac.uk/teaching-and-learning/education-sustainable-development-higher-education#practice](http://www.advance-he.ac.uk/teaching-and-learning/education-sustainable-development-higher-education#practice)

UNESCO

- [UNESCO Sustainable Development Goals - Resources for Educators, https://en.unesco.org/themes/education/sdgs/material/](https://en.unesco.org/themes/education/sdgs/material/)