GMIT
INSTITIÚID TEICNEOLAÍOCHTA NA GAILLIMHE-MAIGH EO
GALWAY-MAYO INSTITUTE OF TECHNOLOGY

EDUC09018
Education for Sustainability

Full Title	Education for Sustainability		
Status	Uploaded to Banner	Start Term	2018
NFQ Level	09	ECTS Credits	10
Module Code	EDUC09018	Duration	15 weeks - (15 Weeks)
Grading Mode		Department	Letterfrack
Module Author	Mark Kelly		

Module Description

The module is in direct response to the National Strategy on Education for Sustainable Development (ESD) in Ireland 2014-2020 (Department of Education and Skills, 2014), which calls for a holistic whole institution approach to sustainability across the higher education sector and identifies clear gaps in the 'preparedness of lecturers to facilitate the type of participatory learning that is most frequently associated with effective ESD'. Education for Sustainable Development (ESD) or Education for Sustainability is a vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the Earth's natural resources. ESD applies transdisciplinary educational methods and approaches to develop an ethic for lifelong learning, fosters respect for human needs that are compatible with sustainable use of natural resources and the needs of the planet, and nurtures a sense of cooperation and global solidarity (UNESO Decade of ESD, 2005-2014).

The module will seek to build on existing sustainability initiatives across all campuses to create a dynamic community of practice, consisting of staff, students and community stakeholders, who are committed to integrating and embedding inter- and transdisciplinary approaches to sustainability across all areas of academic practice. This inquiry-based, research-informed, experiential and active learning approach will focus on real-world issues within an holistic educational framework informed by the 4 Cs of culture, campus, curriculum and community as identified by the Rio+20 Treaty on Higher Education, the 17 United Nations Sustainable Development Goals, the UNECSO Roadmap for Implementing the Global Action Programme on Education for Sustainable Development and the National Strategy on Education for Sustainable Development in Ireland.

≣	Learning Outcomes *on completion of this module the learner will/should be able to;*
1.	Explore and critically evaluate sustainability-related international best practice examples of curriculum design, pedagogical approaches and assessment strategies to inform the design and testing of participatory learning 'interventions' to create cognitive, affective and behavioural learning opportunities.
2.	Identify and evaluate synergies between the formal and informal ('hidden') curricula using a place-based and living laboratory-based pedagogical framework to develop experiential and interdisciplinary learning opportunities.
3.	Create and test an evidence-based research framework to support the design, piloting and evaluation of learning 'interventions' to measure their impact at a granular level i.e. level of engagement, marks, feedback, attitudes and awareness.
4.	Identify possible synergies between academic practice (teaching and research), institute culture and community needs to create an experiential reciprocal lifelong learning framework for local 'Sustainability in Practice' initiatives.
5.	Apply future-oriented thinking to address the fundamental questions about the overall purpose and direction of higher education to build embedded pathways for sustainability learning and active citizenship across the curriculum.

Indicative Syllabus

Prior to commencing the module, each participant will complete a pro-environmental attitudes and self-reported behaviour online survey using an adapted version of the New Ecological Paradigm (NEP) scale and complete a personal ecological/carbon footprint test to provide a personal context for the subsequent workshops. A post-completion critical reflection exercise will also take place to measure impact.

Education for Sustainability Curriculum, Pedagogy and Assessment Strategies (Workshop 1)

Review international ESD policies and initiatives including the: Decade of Education for Sustainable Development (DESD); National Strategy for Sustainable Development in Ireland 2014-2020; UN Sustainable Development Goals; and the Green Campus Programme.

Critically evaluate international best practice in relation to: embedding ESD into higher education; curriculum infusion and 'bolt-on' strategies;

transformative pedagogical examples and styles aligned to the principles of learning to know, learning to do, learning to be, learning to live together, learning to transform oneself and society (UNECE, 2011); the role of learning outcomes, competences, graduate attributes and literacies; and innovative constructively aligned assessment strategies.

Identify opportunities to embed sustainability through a synoptic assessment of current personal academic practice using a curriculum integration matrix to develop student-centred, co-operative, interdisciplinary learning activities.

Education for Sustainability and Campus Management, Operations and Governance (Workshop 2)

Introduce place-based learning, the campus as a living laboratory, communities of practice approaches and experimentalist governance for social change models.

Review international best practice in relation to campus management, operations and governance and leadership including the: Green Campus Programme; SEAI Energy Efficiency Public Sector Programme; green procurement strategies; eco-campus models; carbon-neutral or zero-carbon institutional policies; benchmarking and mapping tools.

Identify explicit and implicit learning opportunities through a formal and informal (hidden) holistic curriculum lens that will inform the design of multilateral, multidisciplinary and experiential learning activities based on the cross-fertilisation of teaching and learning practice, action research and the experimental nature of the living laboratory approach.

Investigate the role of GMIT as a sustainability communication channel for lifelong learning, student, staff and community engagement and behaviour change.

Examine the role and impact of institutional culture, governance, policy and strategies in supporting and implementing a whole institute approach to sustainability through an organisational learning framework.

Education for Sustainability and Research (Workshop 3)

Review existing sustainability-related research activities in GMIT to identify opportunities within the research-teaching nexus to develop interdisciplinary evidence-based learning resources.

Explore multi-methodological approaches to capture synergies between education for sustainability curriculum and pedagogical reform, community engagement and campus management to design an interdisciplinary research framework to produce 'actionable' knowledge that will empower behaviour and institutional change.

Education for Sustainability and Community Engagement (Workshop 4)

Explore the role and contribution of the higher education sector in social, cultural, economic and environmental issues using international best practice examples.

Review pedagogical approaches and research methodologies employed in developing community-engaged experiential and social learning opportunities including the: Campus Engage Programme, ongoing GMIT initiatives and international best practice in civic engagement and service learning.

Identify and explore synergies between academic practice (teaching and research), institute culture and community needs, to develop an experiential reciprocal lifelong learning framework for regional 'Sustainability in Practice' initiatives.

Sustainable Futures Ideas Lab (Workshop 5)

Present implemented sustainability 'interventions' as part of a participatory peer-led review cycle to discuss the key lessons learned that will inform an emerging education for sustainability network of staff, students and community stakeholders within GMIT.

Participate in foresight, back-casting and scenario-planning activities to reimagine possible sustainable futures that aim to tackle the 'wickedness' and complexity of proposed sustainability 'solutions'.

Identify coordinated and complementary pathways to embed sustainable futures learning experiences throughout the curriculum using transformative student-centred pedagogical best practice.

Teaching and Learning Strategy

Five symbiotic workshops will be facilitated by a collaborative multi-campus team of staff who will employ an inquiry-based and research-informed flipped learning approach to create a dynamic and democratic learning environment. Each workshop will inform a process of rigorous critical reflection and analysis to enable participants to deconstruct and reconstruct their own academic practice through the sustainability lens. The module will create a learning environment where inter- and transdisciplinary problem-based, peer, student-centred, transformative, socially-engaged, experiential and research-led teaching and learning strategies will be debated and contested to co-produce and share explicit and tacit knowledge throughout the Institute.

Assessment Strategy

The module will employ a Pass/Incomplete 100% formative continuous assessment strategy incorporating two assignments framed by the 4Cs of: **curriculum**, pedagogy and assessment; **culture**, including the teaching-research nexus; **campus** management, operation and governance; and **community** engagement. The four assignment tasks (10% each) contained in Assessment 1 (40%) will scaffold and inform Assessment 2, which aims to stimulate transformative change in academic practice and/or personal behaviour (60%).

Repeat Assessment Strategies

Each assignment will be assessed on a Pass/Fail basis with feedback provided via specifically designed rubrics. Where assignments are

deemed unsatisfactory, resubmissions will be facilitated prior to the completion of the module. Students will also have opportunity to present 'repeat' assignments in the autumn.

Indicative Coursework and Continuous Assessment:		100 %		
Form	**Title**	**Percent**	**Week (Indicative)**	**Learning Outcomes**
Assignment	Critical Reflection Frameworks on Academic Practice	40 %	OnGoing	1,2,3,4
Assignment	Education for Sustainability Portfolio	60 %	End of Semester	1,2,3,4,5

Part Time Average Weekly Workload:			2.67 Hours		
Type	**Description**	**Location**	**Hours**	**Frequency**	**Weekly Avg**
Workshop	Facilitated Participatory Workshops	Flat Classroom	20	Once Per Module	1.33
Independent Learning	Self-Directed Learning	Not Specified	190	Once Per Module	12.67
Online Learning	Self-Directed Learning	Not Specified	40	Once Per Module	2.67

Recommended Reading Book List

Jucker, R., (2014). *Do We Know What We Are Doing? Reflections on Learning, Knowledge, Economics, Community and Sustainability.* Cambridge Scholars Publishing.
ISBN 1443866857 ISBN-13 9781443866859

(2009). *Management Education for Global Sustainability (Research in Management Education and Development).* Information Age Publishing.
ISBN 1607522349 ISBN-13 9781607522348

(2012). *Teaching Sustainability / Teaching Sustainably.* Stylus Publishing.
ISBN 1579227384 ISBN-13 9781579227388

(2013). *Sustainability, Growth, and Globalization: A Social Science Perspective (International Social Studies Forum: The).* Information Age Publishing.
ISBN 1623962471 ISBN-13 9781623962470

(2013). *Education and Corporate Social Responsibility: International Perspectives: 4 (Developments in Corporate Governance and Responsibility).* Emerald Group Publishing Limited.
ISBN 1781905894 ISBN-13 9781781905890

Thurman, W., (2012). *Entrepreneurship and Sustainability: Business Solutions for Poverty Alleviation from Around the World.* Routledge.
ISBN 1409428737 ISBN-13 9781409428732

(2008). *Global Sustainability Initiatives: New Models and New Approaches.* Information Age Publishing.
ISBN 1593118139 ISBN-13 9781593118136

Apte, S., (2017). *The Sustainability Edge: How to Drive Top-Line Growth with Triple-Bottom-Line Thinking (Rotman-UTP Publishing: Business & Sustainability) (Rotman-UTP Publishing - Business and Sustainability).* Rotman/UTP Publishing.
ISBN 1442650680 ISBN-13 9781442650688

Cabezas, H., (2018). *Sustainability: Multi-Disciplinary Perspectives.* Bentham Science Publishers.
ISBN 1608054292 ISBN-13 9781608054299

(2016). *Sustainability, Climate Change and the Green Economy.* Africa Institute of South Africa.
ISBN 0798305010 ISBN-13 9780798305013

Rainey, L., (2015). *The Pursuit of Sustainability: Creating Business Value through Strategic Leadership, Holistic Perspectives, and Exceptional Performance.* Information Age Publishing.
ISBN 1623968771 ISBN-13 9781623968779

Epstein, J., (2014). *Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental, and Economic Impacts.* Berrett-Koehler Publishers.

(2015). *Sustainability and Governance: 18 (Advances in Public Interest Accounting).* Emerald Group Publishing Limited.
ISBN 1784416541 ISBN-13 9781784416546

Zorpas, A., (2014). *Sustainability Behind Sustainability (Social Issues, Justice and Status)*. Nova Science Publishers, Inc (US).
ISBN 1633215733 ISBN-13 9781633215733

Online Resources

https://www.education.ie/en/Schools-Colleges/Information/Education-for-Sustainable-Development/Education-for-Sustainable-Development.html

https://en.unesco.org/themes/education-sustainable-development

https://www.un.org/sustainabledevelopment/sustainable-development-goals/

https://www.heacademy.ac.uk/

https://sustainabledevelopment.un.org/sdinaction/hesi

http://www.journalofsustainabilityeducation.org/

http://www.greencampusireland.org/

http://www.unesco.org/new/en/santiago/education/education-for-sustainable-development/decade-of-education-for-sustainable-development-desd/

https://www.ue4sd.eu/

http://www.eauc.org.uk/

http://www.aashe.org/

http://www.campusengage.ie/

Other Resources

Each workshop will have a related set of resources hosted on Moodle than will require activie engagemetn on the part of the learner. Some examples include:

Besong, F. and Holland, C. (2015) The Dispositions, Abilities and Behaviours Framework for Profiling Learners' Sustainability Competencies in Higher Education, Journal of Teacher Education for Sustainability, V17(1), 5-22.

Blake, J. et al. (2013) Getting it together: Interdisciplinarity and Sustainability in the Higher Education Institution, PedRIO Paper 4, University of Plymouth UK.

Chalker-Scott, L. and Tinnemore, R. (2009) Is community-based sustainability education sustainable? A general overview of organisational sustainability in outreach education, Journal of Cleaner Production, V17, 1132-1137.

Chaplin, G. and Wyton, P. (2013) Student engagement with sustainability: understanding the value-action gap, International Journal of Sustainability for Higher Education, V15(4), 404-417.

Hayles, C.S. and Holdsworth, E. (2008) Curriculum change for sustainability, Journal for Education in the Built Environment, V3(1), 25-48.

Lambrechts, W. et al. (2013) The integration of competences for sustainable development in higher education: an analysis of bachelor programs in management, V48, 65-73.

Lambrechts, W. and Van Petegem, P. (2015) The interrelations between competences for sustainable development and research competences, International Journal for Sustainability in Higher Education, V17(6), 776-795.

Luna, H. et al. (2012) Universities and the Green Economy: graduates for the future, UK Higher Education Authority policy think tank report.

Mochizuki, Y. and Fadeeva, Z. (2010) Competences for sustainable development and sustainability: Significance and challenges for ESD, International Journal of Sustainability for Higher Education, V11(1), 975-988.

Rieckmann, M. (2012) Future-oriented higher education: Which key competences should be fostered through university teaching and learning? Futures, V44, 127-135.

Shephard, K. (2008) Higher education for sustainability: seeking affective learning outcomes, International Journal of Sustainability for Higher Education, V9(1), 87-98.

Singer-Brodowski, M. (2017) Pedagogical content knowledge of sustainability: A missing piece in the puzzle of professional development of educators in higher education in sustainable development, International Journal of Sustainability in Higher Education, V18(6), 841-856.

Svanstrom, M. et al. (2008) Learning outcomes for sustainable development in higher education, International Journal of Sustainability for Higher Education, V9(2), 339-351.

Tarrant, S.P. and Thiele, L.P. (2016) Practice mades pedagogy - John Dewey and skills-based sustainability education, International Journal of Sustainability in Higher Education, V17(1), 54-67.

UNESCO (2005) Guidelines and Recommendations for Reorienting Teacher Education to address Sustainability, Technical Paper No. 2, UNESCO Education Sector.

Wood, B. et al. (2016) Sustainability Champions?: Academic identities and sustainability curricula in higher education, International Journal of Sustainability in Higher Education, V17(3), 342-360.

Additional Information

Additional resources will be hosted on Moodle that relate to the workshop topics and themes.

Programme Membership

GA_LDTLG_O09 201800 Postgraduate Diploma in Arts in Education in Teaching and Learning
GA_LMTLG_V09 201800 Master of Arts in Teaching and Learning