

BME5107: Green Lab Principles & Practice (starts late September 2026)

Green Lab Principles and Practice

BME5107

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Duration 10 weeks	Next start date September 2026
NFQ Level 9	ECTS 10 Credits
Mode of Study Online	Apply By Aug 28, 2026, 5PM
Fee €1450	

<https://www.universityofgalway.ie/courses/micro-credentials/list/science-engineering/green-labs-principles/>

Module Overview

This module aims to provide a general overview of key environmental concepts such as climate change, plastic pollution, principles of sustainability, sustainable development goals, and biodiversity. It will briefly explore how perspectives from psychology, sociology, communication, circular and doughnut economy, and the study of ethics and governance provide us with insights into how perception and behaviour influence responses to environmental issues. In addition, the lifecycle of materials, and the environmental impact of the resources and equipment typically used in scientific laboratories will be examined in some detail. These ideas will form the backdrop to a focused study on how the organisation of, and practices in, scientific laboratories can be reformed to reduce their environmental footprint and be established on a more sustainable basis.

Course Contributors

Dr Una FitzGerald: Dr FitzGerald is the module and is an Associate Professor in Biomedical (<https://www.universityofgalway.ie/science-engineering/engineering/our-school/staffprofiles/unafitzgerald/>). Her primary area is Multiple Sclerosis and neurodegenerative. However, since 2018 she has developed an interest expertise in the area of lab sustainability. In 2019 she CURAM lab to be the first in Europe to gain Green Lab from My Green Lab (see <https://www.youtube.com/watch?v=9QuQ6XoEMKs>). to chair the Sustainable Energy Authority of Ireland's working group for public sector labs followed, along with the launch on Earth Day 2022 of Irish Green Labs (see <https://irishgreenlabs.org/>). In November 2023, she was the inaugural recipient of Science Foundation Ireland's award for 'Green Transition' and during My Green Lab's Global Summit in September 2024, she received a 'Life-time Achievement' award from My Green Lab. In 2025, the International Institute for Sustainable Laboratories (I2SL, <https://www.i2sl.org/2025-award-winners>) awarded Research Ireland's Centre for Medical Devices (Cúram) for piloting lab greening across Ireland.



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An invitation

Dr Iain MacLaren: Dr MacLaren is the Director of Excellence in Learning & Teaching (CELT), which of responsibilities including technologies to support learning (whether in the classroom or online), the development of academic staff, teaching and policy and strategy, and research and scholarship in education. Prior to taking up this role, he taught and a number of universities in Scotland and England, and disciplinary background is in Astrophysics (BSc, Hons) Edinburgh, PhD Durham) which broadened also to atmospheric physics, advanced computing techniques, multimedia technologies, and education. He has participated in, and led, a number of national and international projects related both to professional development and learning technologies. He was a founding Board member of the National Forum for the Enhancement of Teaching & Learning, is currently a Principal Fellow of the Higher Education Academy/Advance HE, and writes and publishes in the field, most recently in Reflective Teaching in Higher Education (1st and 2nd Editions, Bloomsbury) which is a core text for many Postgraduate programmes in teaching and learning.



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Dr Caitriona Carlin: Dr Carlin has a BSc in Environmental a PhD in Zoology, both from UCD. From 2008, she was at the University of Galway as a postdoctoral researcher and since 2011, has been Coordinator of Sustainable Environments/Sustainable Resource Management Policy and Practice. Dr Carlin has been a full-lecturer since 2021. She led the setting up of the Biodiversity Trail on the University of Galway Campus (<https://www.universityofgalway.ie/biodiversitytrail/>). Between 2014 and 2023, Dr Carlin was a Principal Investigator on an EPA-funded project entitled 'Health Benefits from Biodiversity' (including the Nature & Environment Attain & Restore Health, <https://www.epa.ie/publications/research/environment-health/research-348-nature-and-environment-to-attain-and-restore-health-near-health.php>). In July 2025, the EPA awarded Caitriona €657,464 to carry out research on "Collective Opportunities in Nature & Environment for Community Transformations."



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time

Course Contributors

Dr Gesche Kindermann

Dr Kindermann has a BSc in Environmental Science (NUIG), Ecosystem Conservation & Landscape Management (UCC), Environmental Science. For a period, she was also a with the Wildlife Conservation Society in Maroanetra, Madagascar. Dr Kindermann is the Director of the MSc Environmental Leadership and the academic coordinator for Biodiversity and Land Use Planning. She is an on the EPA-funded “Sheer Wellbeing” and NEAR Health project, an EPA/HSE funded project. Gesche is also the coordinator of the campus-wide ‘Introduction to Sustainability’ module, delivered to multiple undergraduate programmes and hundreds of students, in semesters 1 and 2. Dr Kindermann’s main research areas of interest are habitat and landscape conservation management with particular focus on coastal dune systems and machairs.



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volunteer

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investigator

Guest Lecture:

Jack O’Grady, Director of Certification, My Green Lab



- Graduated from MTU in 2019 with a 1H1 Degree in Nutrition & Health Science
- 2018-2021 – a Lab Tech and then Senior Associate in R&D, @ Pepsico (Cork)
- 2021-2022- QC Analyst @ Regeneron (Limerick)
- ✓ Set up European Green Team for Pepsico
- ✓ Joined MGL, Feb 2022 as Sustainability Programmes Manager
- ✓ Director of Certifications - Impact Laboratories