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EDI Guide

Equality, Diversity and Inclusion (EDI) in preparing students for professional practice



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The Institution of Environmental Sciences

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Acknowledgements

About the Institution of Environmental Sciences

The Institution of Environmental Sciences (the IES) is at the forefront of uniting the environmental sciences around a shared goal: to work with speed, vision and expertise to solve the world's most pressing environmental challenges, together. As the global professional membership body for environmental scientists, we support a diverse network of professionals all over the world – and at every stage of their education and careers – to connect, develop, progress and inspire.

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Acknowledgements

About CEDHE

The Community for Environmental Disciplines in Higher Education (CEDHE) provides representation and leadership for environmental education. We are an active networking organisation enhancing the quality of outcomes for education institutions teaching environmental disciplines. We facilitate connections between members and develop new avenues of international co-operation within the environmental science community.

This Guide was compiled by members of CEDHE and a dedicated working group.

The CEDHE Committee would like to thank our accredited institutions and associated staff for contributing to this EDI Guide to provide support to the CEDHE Community:

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“Inclusion of diverse groups is crucial to the development of subject learning communities”

QAA ES3 Benchmark Statement, March 2022

Introduction

Following the publication of the QAA ES3 Benchmark in March 2022, the Community for Environmental Disciplines in Higher Education (CEDHE) strengthened the focus on Equality, Diversity and Inclusion (EDI) and Employability within the CEDHE/IES accreditation of academic programmes. The CEDHE/IES accreditation process provides a unique opportunity to identify best practice in relation to how environmental science and related programmes are supporting students from diverse backgrounds to succeed in the profession.

To support our education community in delivering equitable, diverse and inclusive programmes, and further ensuring students from diverse groups are supported to succeed in professional practice, the CEDHE committee have published this guidance. This document explores how to address EDI in preparing students for professional practice in line with the QAA ES3 Benchmark Statement and Section B of the CEDHE accreditation application. This guidance has been informed by examples from our accredited higher education institutions. There are already some excellent resources that document best practice in relation to how programmes are designed to ensure they are equitable, diverse and inclusive. We have included some resources in this guide to complement the examples submitted from the community, which focus their attention on EDI best practice with respect to preparing students for professional practice.

This project, to surface and share examples, also forms an important part of the IES's EDI Plan 2023-2026, which seeks to enhance diversity and inclusion across the sector, help the IES to act as an agent for change, and lead by example for the betterment of our society, economy and environment.

We hope that publishing examples from within our community will support the continuous improvement of environmental science education, and lead to a more diverse and inclusive workforce in the future.

This EDI Guide is a collection of examples, ranging from programme, department and institution specific initiatives. These are indicated with coloured ribbons on the heading tab of the name of the institution, illustrated in the key below.

This is a growing repository of work. If you would like to contribute to this guide please contact us by email at education@the-ies.org.

Programme

Department

Institution

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University of Reading

Programme

Environmental Science BSc (Hons)

The University of Reading BSc Environmental Science programme enables students to develop their project management skills. Collaboration and teamwork are used to build confidence through a series of discipline-specific projects. These provide the skills and experience necessary for students to plan and execute an independent project in the final year of their studies. Equality, diversity, and inclusion is embedded within the activities students undertake during this process.



In their first year, students undertake structured pre-defined projects in teams to quantify air quality, soil quality, and water quality at sites in and around Reading. During the early stages of teamwork students undertake tasks to help develop effective and equitable teams comprising diverse groups of students. These activities are based on the University of Reading Effective Group Work guidance. The benefits of teamwork are introduced to students at an early stage, and the value that employers place on teamwork skills is explained. Students are then asked to introduce themselves to each other and to identify the key skills that each member possesses. Students are then supported to draft a 'team expectations agreement' which outlines the ground rules that members of the group are expected to abide by. All team members retain a copy of the ground rules document. Finally, students agree a communication plan specifying how and when the members of the team will meet each other and contact each other. Instructors provide key advice on how to foster effective and equitable team dynamics, including awareness of cultural differences between team members.

During their second year, students participate in group projects that are intended to address an open-ended challenge presented to them, often by an external 'client'. The projects are framed as discipline-specific consultancy-style projects. Students select a project they are interested in and thus form a team of students with similar interests. Care is taken to ensure that project allocation is equitable, teams are as diverse as possible and the staff and external experts engaged reflect the diversity of the discipline.

Students reflect on the role they played within the team (aligned to Belbin Team Roles) in their first year. They are encouraged to build on the teamwork skills they developed in the first year and as they undertake the project together, record the key discussions and decisions that they make in a group meeting record log.

Students develop employability skills through the module by building their self-awareness, based on the University of Reading 'Knowing Yourself' toolkit. Training is provided on Research Ethics and Health and Safety, alongside project management and teamwork stills.

After completing their team projects, students are supported to reflect again on their role within the team alongside their interests and skills. This opportunity is used to look forward to the development of a dissertation project which aligns with their interests and career ambitions.

Students select job adverts for roles that they aspire to and identify the skills required for the role. They create a portfolio that outlines their key strengths and skills. Students identify gaps in their skills and are able to sign up to a range of workshops to acquire the skills necessary for them to undertake a dissertation research project, and ultimately establish a career, in their chosen field.

Dila Atmaca
Environmental Science BSc Student

"Throughout the BSc Environmental Science degree, I significantly improved my project management skills. In my first year, Earth Lab and Data Environment modules helped me understand how to manage environmental data effectively in team-based projects. By the second year, the Research Training module refined my ability to organise tasks and lead group work, ensuring deadlines were met efficiently. In my final year, the Geography and Environmental Science field class in southern England and Abergavenny, Wales, provided a hands-on opportunity to manage fieldwork organisation and collaborate with a diverse group. Finally, my dissertation research allows me to apply and enhance these skills independently, from planning to execution, while addressing real-world environmental issues".

Author:
Professor Tom Sizmur, Programme Director for BSc Environmental Science

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Sheffield Hallam University

Department

Supporting Minoritised Student Groups

Ifrah Salih, a Senior Lecturer in the Academic Development and Inclusion team, created the first Minoritised Student Group (MSG) in the Department of Nursing and Midwifery in 2018. Since then Academic Development and Diversity (AD&D) has gone on to support the creation of 12 further MSGs in departments in the university, including Sheffield Institute of Social Sciences in which the accredited programme, Climate, Sustainability and Environmental Management BSc (Hons), sits. Students and staff are often reluctant to report racial harassment at universities, for example, due to a fear of retaliation and a lack of trust in universities' responses.[1] This can negatively impact the experiences and outcomes of global ethnic majority individuals.

Through discussions, students from global ethnic majority groups shared their personal and academic experiences. It was evident there were issues with feelings of belonging and a lack of safe spaces to express their concerns in relation to their university experience.[2]

Furthermore, other students and staff are often unaware of the impact of racism so there is a need to engage them in discussions to ensure that everyone assumes responsibility for change.

The MSGs aim to increase awareness of contemporary issues that students face, particularly those from global ethnic majority backgrounds.[3] The groups aim to provide peer support, allyship and belonging and to address the needs of global ethnic majority students. MSGs are evolving initiatives and the activities delivered are determined by the students in each group to ensure that their relevant needs are addressed, which means that there is variation between each MSG. Groups tend to meet on a regular basis and a variety of other activities take place, such as: workshops on cultural awareness and navigating identity and microaggressions; talks from global ethnic majority academics; senior leaders and recent graduates; conferences; curriculum partnership work; and workshops with placement providers.

MSG Outcomes

Although outcomes may differ due to the different activities delivered across each MSG, several consistent outcomes were identified, which include:

- Students and staff in the groups have greater knowledge and empathy of the issues faced by global ethnic majority individuals
- Students in the group develop skills, such as in delivering presentations
- Global ethnic majority students in the groups feel validated, develop greater self-confidence and a positive sense of belonging
- Global ethnic majority students have access to positive role models
- A local network for global ethnic majority individuals, including students and staff at the university and external stakeholders, is created
- All staff and students in the groups are empowered to make changes in their own sphere of influence
- The groups influence organisational practices, processes and policies about race equity
- The experiences of all global ethnic majority students and staff are enhanced and supported



Student feedback

Feedback collected from members highlight that MSGs provide a support network for students, increase awareness of issues affecting global ethnic majority students, and provide positive role modelling. Staff in the groups have felt empowered to support global ethnic majority students.[2]

Programme

Climate, Sustainability and Environmental Management BSc (Hons)

A “Minoritised Student Group” initiative was launched, to build a community for underserved students studying the Climate, Sustainability and Environmental Management BSc (Hons) programme. This group is community-led and supported by staff and the wider department through provision of time and resources to support activities; including linking students to focussed careers talks and mentoring. Those activities will support success in professional practice through learning from professionals with shared lived experiences, through an increased sense of belonging, and improved student awareness of role models in various potential careers.

Author:
Ifrah Salih, Senior Lecturer in
Academic Development and Diversity

Sheffield Hallam University

Sheffield Hallam University

Case study references

1 **Universities UK (2020)** Tackling racial harassment in Higher Education: progress since 2020 **https://www.universitiesuk.ac.uk/what-we-do/policy-and-research/publications/tackling-racial-harassment-higher-0** (Accessed: 22 April 2024)

2 **Kirkham, L., & Salih, I. (2021)** Sheffield Hallam University Nursing and Midwifery Minoritised group: the experiences of black student nurses, past and present. International Family Nursing Association. Black History Month 2021 – International Family Nursing Association (IFNA) – UK and Ireland Chapter. **https://ifnaukandireland.org/black-history-month-2021/** (Accessed: 22 April 2024)

3 **Equality and Human Rights Commission (2019)** Racial harassment inquiry: survey of universities. **https://www.equalityhumanrights.com/sites/default/files/racial-harassment-inquiry-survey-of-universities.pdf** (Accessed: 23 April 2024)

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University of Leeds

Institution

Equality & Inclusion

Equality and Inclusion work within the Faculty of Environment is aligned with the wider University of Leeds Equality and Inclusion Framework (2020-25), Race Equality Framework and University statement on Black Lives Matter, which can be viewed through the Equality & Inclusion Unit website. Equality and Inclusion within the Faculty of Environment is overseen by the Faculty Equality and Inclusion Committee. The committee provides a basis for action on a wide range of topics, including widening participation and closing awarding gaps on our degrees, accessibility of field trips, and supporting career development for ethnic minority and female students and staff.

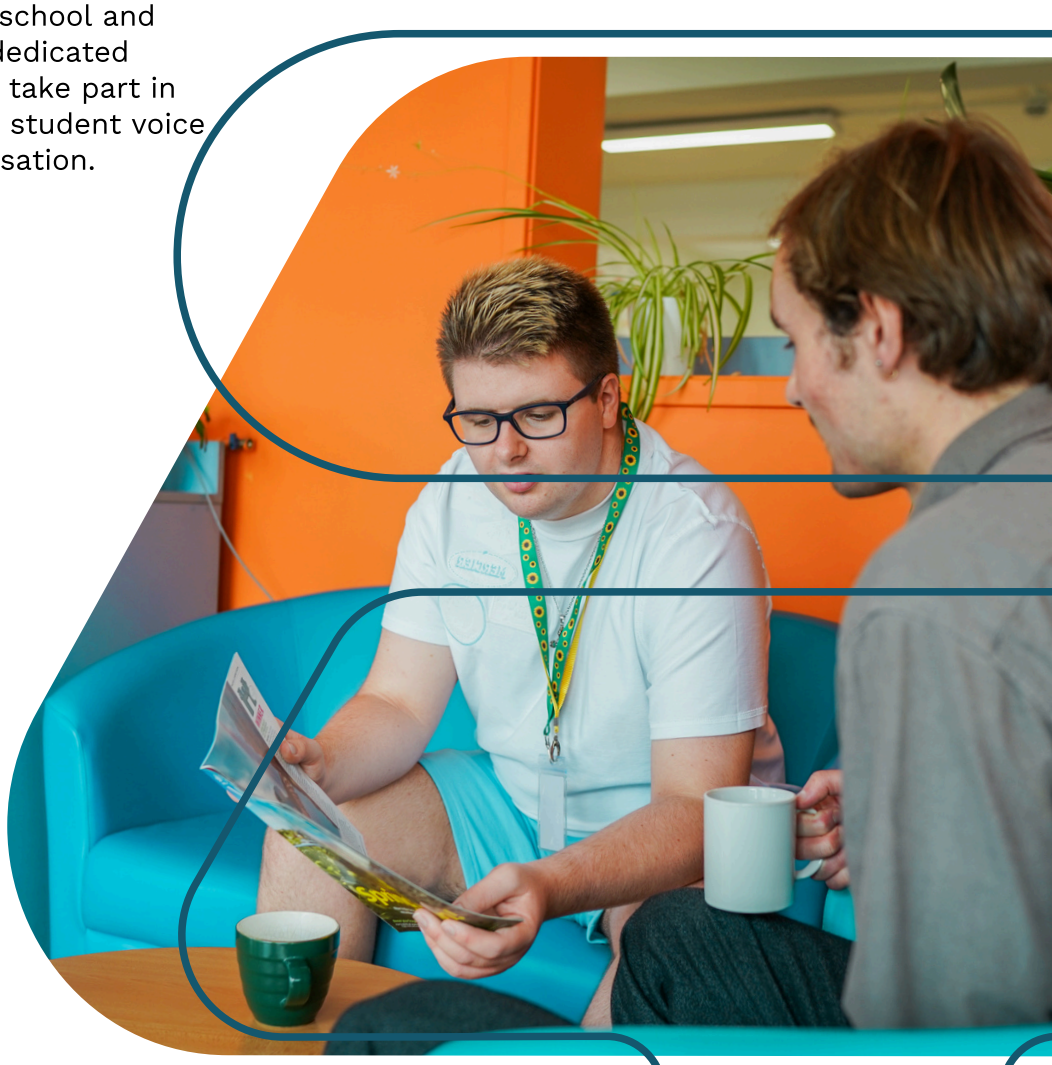


Access to Leeds

Access to Leeds is a contextualised admissions scheme for UK undergraduate applicants. Students have access to reduced entry requirements to widen participation, usually up to two grades lower than the standard offer. Access to Leeds also offers additional consideration for applicants based on their personal circumstances such as first-generation students, school quintiles and examination grades. Students joining the University of Leeds through the Access to Leeds scheme have access to a variety of support services such as events, academic personal tutoring, and on-course support through the Plus Programme. Within the School of Earth & Environment, a foundation year is available which permits students to enrol onto the degree programmes who may not possess the relevant academic backgrounds to progress directly to undergraduate level. Specific to the Environmental Science BSc programme, The University of Leeds deliver a Massive Open Online Course (MOOC) called Planet Earth: Understanding and Protecting our Environment (via FutureLearn). This online course is available for anyone to enroll, providing an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale.

Student Voice

At the University of Leeds, the student voice is central to the programme design and delivery. Students take part in regular student/staff forum meetings to inform programme development and procedures are in place to tackle issues raised in these meetings. The student/staff forums are school and programme specific and dedicated student reps volunteer to take part in these forums to bring the student voice to the front of the conversation.



Programme

Environmental Science BSc / MEnv

Students on the Environmental Science programmes at the University of Leeds take part in career planning activities throughout the duration of their studies. The School of Earth & Environment have built long lasting relationships with many employers that recognise, value and foster EDI within the workplace.

Industry speakers are invited to present and network with students at events hosted by and for students on the programme. The Environmental Science programme has a student representative to ensure that student voice is heard and to allow an opportunity for feedback on a modular scale.

All Environmental Science students have the opportunity to take part in placement opportunities. This is a popular route with over a third of students taking part. Support is provided to help students secure placement opportunities and this is provided throughout the duration of their placement. Shorter term placements are also available to students during the summer months in research laboratories, giving students hands- on experience to enhance their practical skills.

Author: Dr Phil Murphy
Lecturer (Teaching and Scholarship)

UNIVERSITY OF LEEDS

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Manchester Metropolitan University

Institution

Decolonising the Curriculum Toolkit

Decolonising the Curriculum (DtC) is about identifying, acknowledging and challenging the ways in which colonialism has impacted upon perceived knowledge and learning. It is not about deleting existing knowledge or history, but about embracing knowledge systems outside of typical western understanding, and which have historically been ignored. Decolonising is integral to an inclusive curriculum, and seeks to both recognise and address the legacies of disadvantage, injustice and racism that have arisen from historic global domination by 'The West', and the consequent inherent 'whiteness' of our Science, Technology, Engineering, and Mathematics (STEM) disciplines. The DtC Toolkit has been developed in liaison with the Faculty of Science and Engineering Narrowing the Awarding Gaps Task Group, and aims to support academic staff in Science and Engineering in the process of reviewing and decolonising their teaching.

Staff narratives

Colleagues from across the Faculty of Science and Engineering at Manchester Metropolitan University provide an honest and reflective narrative on their understanding of decolonising curricula. The anonymised accounts address perspectives on decolonising and why they think decolonising is important in Higher Education.

"A decolonised curriculum.... stretches far beyond the taught curriculum; it reaches into the hidden curriculum and should encourage more openness and tolerance."

"It is important to empower our students with... alternative perspectives and experiences"

"Every student needs... a curriculum that is equally accessible to them, and it should nurture their understanding and learning."

Find out more

You can find out more about the DtC Toolkit on the Manchester Metropolitan website. The dedicated webpage includes guidance information, staff narratives, voices of student leadership and video playlists from this piece of work.

Programme

Environmental Science BSc (Hons)

Graduate attributes beyond discipline specific skills and knowledge are embedded in all units and their assessment of the Environmental Science BSc (Hons) programme. A full range of teaching activities and the use of a varied range of assessment techniques is utilised to suit different learning styles and strengths in the pursuit of inclusivity and equity. A wider range of active teaching methods and assessment related to professional practice activities has been promoted within the programme. Tutors are asked to look out for opportunities for effective small group and one-to-one interventions.

A student's own consideration of equity and diversity issues are graduate outcomes and are being increasingly built into assessments. Diversity metrics are now included in the annual programme leader's reports. Any difference between the achievements of Black, Asian, and Minority Ethnic and other students are considered and if required proposals need to be made to address these through inclusive course design principles.



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Accreditation Guidance

Building EDI for professional practice into the wider programme

The CEDHE/IES accreditation process provides a unique opportunity to identify best practice in relation to how environmental science and related programmes are supporting students from diverse backgrounds to succeed in the profession.

What are we looking for in your application?

The following “Quick Wins” have been collated by the CEDHE Committee to complement the examples in this guide. These could be used to help guide your narrative when completing Section B1 (Equality, diversity and inclusion in preparing students for professional practice) of the CEDHE accreditation application, and to demonstrate alignment with the QAA ES3 Benchmark Statement.

Quick Wins

- Host a diverse range of external speakers from professional practice
- Ensure any employer advisory groups include members from community groups
- Seek live projects from community groups
- Ensure alumni profiles are drawn from a diverse range of graduates
- Work with the careers service to ensure where employability is embedded in the curriculum, that it addresses the diversity issue of the profession
- Ensure learning materials are available in multiple formats for student access based on the ‘Universal Design for Learning’ principle.

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Resources

These are just a few of the growing number of resources aimed at embedding EDI into environmental science and related programmes:

IES, our commitment to promoting and fostering equity, diversity and inclusion
Equity, Diversity and Inclusion Plan 2023-2026.
https://www.the-ies.org/news/equity-diversity-and-inclusion-2023-2026

RGS with IBG, Higher Education Resources for Geography.
Enabling Equitable Cultures
https://www.rgs.org/research/higher-education-resources?loadall=0&pageindex=1&searchterm=enabling

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Envision. Improving EDI in the postgraduate community in environmental science.
https://www.envision-dtp.org/data-protection-copy/

Justice, Equity, Diversity and Inclusion. The International Association for Geoscience Diversity.
https://geoscienceforthefuture.com/resources/diversity-resources/

Diversity in Geoscience UK. Resources.
https://dig-uk.org/resources/

Geology & Colonialism. Reading List of Papers & Perspectives Relevant to Geology & Colonialism.
https://mineralogy.digital.brynmawr.edu/blog/geology-colonialism-reading-list/

Decolonising Earth Science. Resources to help you decolonise your curriculum.
https://www.decolearthsci.com/resources/

Geoscience for the future. The EQUATOR Project.
https://geoscienceforthefuture.com/the-equator-project/

Dowey, N.J., Lawrence, A., Raji, M., Jackson, C.A.L., Williams, R., Fernando, B., Giles, S., Barclay, J., Brotherson, L., Childs, E. and Houghton, J. (2024) The Equator Project Research School and Mentoring Network: evaluated interventions to improve equity in geoscience research.
https://www.escubed.org/journals/earth-science-systems-and-society/articles/10.3389/esss.2024.10123/full
(Accessed: 19 April 2024)

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Fieldwork

Fieldwork makes up an important part of teaching Environmental Science, adding valuable skills and knowledge to a students career progression. Ensuring fieldwork has been designed to be equitable, diverse and inclusive is paramount in the planning and development of such opportunities. If you're interested in making your fieldwork more inclusive, explore some of the resources below.

Greene, S.E., Antell, G.T., Atterby, J., Bhatia, R., Dunne, E.M., Giles, S., Groh, S.S., Hanson, E.M., Hilton, J., Knight, H. and Kraftl, P. (2021) Safety and belonging in the field: A checklist for educators. **https://eartharxiv.org/repository/object/2607/download/12270/** (Accessed: 19 April 2024)

Yorke, L., Hutchinson , S. & Hurrell , L. (2022) 10 ways to make fieldwork more inclusive and accessible : a guide for educators. **https://research.bangor.ac.uk/portal/files/70783381/10_Ways_To_.pdf** (Accessed: 19 April 2024)

Lawrence, A. & Dowey, N. (2022) Six simple steps towards making GEES fieldwork more accessible and inclusive. Area, 54, 52–59. **https://doi.org/10.1111/area.12747** (Accessed: 19 April 2024)

Rowan, A.V., Olund, E., Pickerill, J. and Souch, C. (2022) Incorporating Equality, Diversity and Inclusion (EDI) into field-based teaching and research fieldwork. In EGU General Assembly Conference Abstracts (pp. EGU22-8749). **https://ui.adsabs.harvard.edu/link_gateway/2022EGUGA..24.8749R/doi:10.5194/egusphere-egu22-8749** (Accessed: 19 April 2024)

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Can you help us to grow this resource?

This EDI Guide is a growing repository of case studies incorporating EDI into programme design, development and delivery. If you have a suitable case study and would like to be involved, please get in touch.

Contact us: **education@the-ies.org**

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