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# Planetary Health Report Card (Medicine): *University of Southampton*

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University of  
**Southampton**

2024-2025 Contributing Team:

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## Summary of Findings

Overall Grade	A
Curriculum	A
<ul style="list-style-type: none"> <li>The University of Southampton's Faculty of Medicine have integrated planetary health teaching into the curriculum across all years. It extensively covers the impact of climate change on patients' health and the challenges faced by health systems as a result, and has provided students with access to resources to further their knowledge on the topic. They have also provided teaching on how climate change and planetary health will affect students' medical practice, and how they can have discussions with patients on how to make greener choices for their well-being and the environment.</li> <li><b>Recommendations:</b> Including more opportunities for students to get involved with student-selected units and optional electives in planetary health. A greater focus on the local impact of climate change would be beneficial.</li> </ul>	
Interdisciplinary Research	A
<ul style="list-style-type: none"> <li>The Faculty of Medicine has faculty members who have a primary research focus on planetary health, including a Planetary Health Research Fellow. The University of Southampton has a dedicated institute that centralises collaborative research into planetary health topics.</li> <li><b>Recommendations:</b> Greater involvement of the local community (especially those disproportionately impacted by climate change) in the university's research agenda.</li> </ul>	
Community Outreach and Advocacy	B
<ul style="list-style-type: none"> <li>Community outreach projects have continued to run including the university's work with LifeLab, aimed at local adolescents. Planetary health topics are also discussed in the faculty's newsletters.</li> <li><b>Recommendations:</b> The University of Southampton Medical School and its affiliated teaching hospital (University Hospital Southampton) could develop educational materials for patients about environmental health exposures and the health impacts of climate change.</li> </ul>	
Support for Student-Led Initiatives	B
<ul style="list-style-type: none"> <li>The Faculty of Medicine supports an active student-led society called Students for Planetary Health. This group has conducted planetary health and sustainability related research and audits. This work has been published in peer reviewed journals and presented at international conferences. The group has recently developed a platform to connect students with hospital clinicians to collaborate on sustainability quality improvement projects.</li> <li><b>Recommendations:</b> The group is currently planning a conference in Autumn 2025, which will improve student, staff, clinician and community interest in planetary health.</li> </ul>	
Campus Sustainability	B+
<ul style="list-style-type: none"> <li>The University of Southampton Medical School has made significant efforts to implement strategies to encourage environmentally-friendly transportation. It also has a waste management system that prioritises reducing unnecessary waste.</li> <li><b>Recommendations:</b> Reduce their reliance on non-renewable energy sources, and promote the use of alternative fuels which are more sustainable across faculties.</li> </ul>	

# Statement of Purpose

*Planetary health is human health.*

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change “the greatest threat to global health in the 21st century,” many health professional school’s institutional priorities do not reflect the urgency of this danger to human health.’

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients’ health. This preparation is in the hands of the institutions providing our health professional training. It is imperative that we hold our institutions accountable for educating health professional students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, and 4) community outreach centred on environmental health impacts 5) school campus sustainability.

# Definitions & Other Considerations

## Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of health professional education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
  1. Describe how the environment and human health interact at different levels.
  2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
  3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School/Department vs. Institution:** When “Medical school” is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.
- **Elective:** The word "elective" refers to an optional course or lecture series that a student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.
- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.
- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

the historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.
- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.
- **Anthropogenic:** Created through human activity
- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

**Other considerations:**

- If there are more than one “tracks” at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

Completed in 2022 a [Literature Review by Metric](#) is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

# Planetary Health Curriculum

***Section Overview:*** This section evaluates the integration of relevant planetary health topics into the medical school curriculum. Today's medical students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that medical students are trained to understand the health effects of these changes, as well as planetary health issues and principles more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.

## Curriculum: General

<b>1.1. Did your medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?</b>	
Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does <b>not</b> have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a <b>lecture</b> on planetary health. (1 points)	
No, the medical school has <b>not</b> offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>The University of Southampton does not provide the choice of an elective focusing on Education for Sustainable Health or Planetary Health. In the five-year programme, there remains the choice of a Global Health student selected unit in Year 1 with a 2 hour lecture titled “Health on a Fragile Planet” that discusses the interactions between climate change and the impact upon human health.</p> <p>Another Student Selected Unit (SSU) offered to Year 3 students covering a wider perspective of healthcare offers “Cooking for Climate” which discusses food systems as a leading contributor towards climate and ecological crises. Students also cover the benefits of sustainable plant-based diets on human and planetary health.</p> <p>Additionally, there is a Global Health SSU in Year 3 which has lectures on Infectious disease, climate change and biodiversity, and catastrophe medicine.</p>	

## Curriculum: Health Effects of Climate Change

**1.2. Does your medical school curriculum address the relationship between extreme heat, health risks, and climate change?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

*Score explanation:*

Year 1: "Temperature Regulation" lecture focuses on the role of extreme heat and human caused climate change, extreme heat and pregnancy and extreme heat and mortality. In the four-year program curriculum, the lecture "Health on a Fragile Planet" includes discussion of extreme heat and excess mortality. This curriculum also includes learning outcomes "Describe the consequences of climate change on the epidemiology of non-communicable diseases, using chronic kidney disease as an example" and "Explain the homeostatic control of body temperature and the links between extreme heat and mortality" with resources provided which explicitly refer to climate change, enabling peer to peer teaching - a core part of the four-year program curriculum.

Year 5: Lecture focusing on extreme heat and the provision of healthcare and impact of healthcare systems. There are references to deteriorating health as a consequence of extreme heat.

**1.3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

*Score explanation:*

Year 1: "Temperature Regulation" lecture addresses the impact of extreme heat on human health. In the four-year program curriculum there is a lecture "Health on a Fragile Planet" that covers this topic extensively. This curriculum also includes a learning outcome, "Describe the consequences of climate change on the epidemiology of non-communicable diseases, using chronic kidney disease as an example" with resources provided to enable peer to peer teaching.

Year 3: GP seminar leads have been previously provided with guidance on the impact of environmental degradation on the provision of healthcare and the importance of healthcare



resilience in the context of a changing climate. In 2025 there is a new primary care symposium on primary care which is delivered to students and covers this topic.

Year 5: “Health System Change - Not Climate Change” discusses the impact of climate and environmental changes impact healthcare systems including natural disasters which impact delivery of efficient healthcare.

**1.4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

2

*Score explanation:*

Year 1: The “Health on a Fragile Planet” lecture discusses the impact of climate change on infectious disease and vector borne disease taught as part of elective Global Health module and on the four-year programme. “Tropical Diseases” lecture discussing impact of climate change on infectious disease with references to prevalence in Europe within the next few decades.

Year 3: Climate change is discussed as an infectious disease threat in “Introduction to Communicable Disease Lecture”. The student-selected Unit on Infectious Diseases includes a lecture titled “Perfect Storm: Climate Change” which discusses biodiversity loss and infectious diseases.

Year 5: The Population and Planetary Health lecture “Health System Change” explains the impact of climate change on human health based on the diagram published by CDC with the link established between climate changes and infectious disease.

**1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:	3
<p><i>Score explanation:</i></p> <p>Year 1: Respiratory Diseases and COPD symposiums associate air pollution and climate change on human health, and alternative eco-friendly substitutes to inhalers. The “Global Health” lecture focuses on the impact of indoor air pollution and mortality rates, and the impact of air pollution on child health. The four-year program lecture “Health on a Fragile Planet” discusses in detail the impacts of indoor and outdoor air pollution on both cardiovascular and lung health. This course also includes learning outcomes “Discuss the environmental factors that influence the rising prevalence of airway diseases (asthma and COPD)” and “Explain the trends in indoor and outdoor air pollution exposure and how this contributes to global morbidity and mortality” with resources provided to enable peer to peer teaching on the topic.</p> <p>Year 3: Lectures within the ethics module discuss the association of air pollution and human health. GP teaching has environmental history with a specific focus on air quality and pollution.</p>	

<b>1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>Year 1: “Global Health part 2” lecture discusses the association between climate change and its impact on cardiovascular health. In the four-year program curriculum the “Health on a Fragile Planet” lecture discusses excess deaths from extreme heat. This curriculum also includes learning outcomes: “Describe the consequences of climate change on the epidemiology of non-communicable diseases, using chronic kidney disease as an example” and “Explain the homeostatic control of body temperature and the links between extreme heat and mortality” with resources provided to enable peer-to-peer teaching.</p> <p>Year 3: GP seminar makes references to the effect of climate change on diabetes. In 2025 a GP symposium is due to discuss the clinical effects of climate change which includes exacerbation of cardiovascular disease.</p> <p>Year 5: “Health System Change - Not Climate Change” lecture discusses benefits of planetary health interventions on cardiovascular health including the elimination of coal and reducing emissions on reducing cardiovascular burden.</p>	

**1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

2

*Score explanation:*

Year 1: “Health on a Fragile Planet” lecture offered to four-year program students and as part of Global Health module discusses the impact of extreme weather on poorer short- and long-term mental health. The SSU module discusses the neuropsychological effects of heat and flooding on mental health.

Year 2: Dementia symposium makes associations between air pollution and Alzheimer’s disease.

**1.8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

*Score explanation:*

Year 1: Nutrition lecture discusses the interaction between food, planetary health and human health by promoting plant-based diets. “Global Health Chronic Disease” lecture discusses the management of chronic diseases through global food and water security and includes a case study on Nauru referring explicitly to the destruction of ecosystems leading to loss of local food sources. An SSU Global Health Lecture discusses food and water security loss in depth. In the four-year curriculum, there are learning outcomes: “Discuss the impacts of biodiversity loss on global food supply and human health” and “Describe the co-benefits of promoting a healthy diet” with resources provided to enable peer to peer teaching on the topic.

Year 2: Elective module makes brief references to the impact of reduced crop yield and shortages of global food supply and discusses how human microbiota are affected by biodiversity loss.

Year 5: “Health System Change – Not Climate Change” discusses the impact of water quality and water security on human health.

**1.9. Does your medical school curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

*Score explanation:*

Year 1: “Global Health - Chronic Disease” lecture discusses how LMICs are disproportionately affected by climate change. “Health on a Fragile Planet” discusses how global health inequalities including environmental degradation affects individuals of lower socioeconomic backgrounds who rely on plant-based traditional medicine.

Year 3: Ethics class discussion covers how socioeconomic and environmental health inequalities are exacerbated amongst lower socioeconomic groups in the UK.

**1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

*Score explanation:*

Year 1: “Global Health of Chronic Disease” discusses the impact of climate change particularly on low to middle income countries using a case study of Nauru. The Elective “Global Health” module makes references to the effect of climate change on different geographical regions. The “Developmental Origins of Health and Disease” lecture discusses how climate change affects childhood health and subsequent adult health and in the four-year curriculum the “Health on a Fragile Planet” Lecture explicitly discusses how global health inequalities are exacerbated by climate change.

***Curriculum: Environmental Health & the Effects of Anthropogenic Toxins on Human Health***

<b>1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i>          Year 1: “Developmental Origins of Health and Disease” lecture discusses in depth the impact of the environment on foetal and subsequent adult health.</p>	

<b>1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university’s surrounding community?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i>          The four-year programme features case studies that make references to the Southampton docks and air pollution. “Psychological Aspects of Obesity” lecture refers to a journal paper on how women from disadvantaged communities are affected in the Southampton region (“The Southampton initiative for health: a complex intervention to improve the diets and increase the physical activity levels of women from disadvantaged communities”).</p> <p>Future implementation of the impact the university’s surrounding community has on the population's health would be beneficial in public health or epidemiological lectures.</p>	

**1.13. To what extent does your medical school emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

2

*Score explanation:*

“Global Health” lecture makes references to the interactions between indigenous beliefs and medicines and highlights the partnership with local healers where appropriate. “Health on a Fragile Planet” lecture discusses the impact of environmental degradation affecting traditional plant-based medicine.

Further recommendations would include:

- including case studies on Indigenous communities' approaches to health, wellness, and environmental stewardship
- introducing students to traditional healing methods, such as herbal medicine, community-based care, and spiritual practices, emphasizing evidence-based benefits where applicable

**1.14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

*Score explanation:*

Year 1: “Health on a Fragile Planet” lecture covers the effects of CO2 emissions, vector-borne diseases, mental health, global conflict and water supply on the health of marginalised communities. LMIC are shown to be negatively affected by planetary health factors. “Developmental Origins of Health” discusses how children are disproportionately affected in LMICs. “Global Health Part 2” discusses the impact of colonisation and environmental destruction on the health of indigenous communities, using Nauru as a case study.

Year 3: Air pollution and poor living conditions are mentioned in relation to individuals from lower socioeconomic backgrounds and refugees. Ethics teaching includes discussions on the inequalities and injustice presented by environmental degradation.

Year 4: Ophthalmology lectures refer to how air pollution is associated with increased risk of ARMD and glaucoma, with higher levels of air pollution affecting individuals from lower socioeconomic backgrounds.

***Curriculum: Sustainability***

**1.15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

*Score explanation:*

Year 1: Nutrition lecture covers the impact of food production and dietary styles on the planet, and covers the 'planetary health diet'. This promotes a primarily plant-based diet, and has not changed in the past year. The 'Health on a fragile planet' lecture covers food and water supply across different regions, and how these are affected by climate change. It also discusses how this disproportionately affects lower-income countries, exacerbating existing inequalities in food security. In the four-year curriculum, there is a learning outcome, "Describe the co-benefits of promoting a healthy diet," with resources provided to enable peer-to-peer teaching on the topic.

Year 5: The 'Health system change' lecture also covers the planetary health diet, including a video from The Lancet Commission providing further detail of the planetary health diet.

**1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?**

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:	3
<p><i>Score explanation:</i></p> <p>Year 1: The “Asthma” lecture discusses and recognises the harmful carbon footprint of asthma inhalers. This also goes into how we should recognise this when prescribing and be mindful of its effects on the environment, as well as providing strategies on greener ways to prescribe.</p> <p>Year 2: In the four-year curriculum, there is a learning outcome “Describe the environmental impact of healthcare activities and national strategies for improvement” with resources provided to enable peer-to-peer teaching.</p> <p>Year 3: GP symposium covers topics of sustainable prescribing in primary care</p> <p>Year 5: A lecture on sustainability in surgery, outlining the environmental impacts of many aspects of surgery and anaesthetics (including equipment, PPE, theatre environment etc). Covers strategies for improvement. Lecture on ‘Health system change - not climate change’ discusses in detail the environmental impact of the NHS and how this is a paradoxical phenomenon. Discusses strategies for change and developing resilience.</p>	

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	Score
The health <b>and</b> environmental <b>co-benefits</b> of <b>avoiding</b> over-medicalisation, over-investigation and/or over-treatment (2 points)	2
The environmental impact of <b>pharmaceuticals</b> and over-prescribing as a cause of climate health harm. Alternatively teaching on <b>deprescribing</b> where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	2
The health <b>and</b> environmental <b>co-benefits</b> of <b>non-pharmaceutical management</b> of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	1
Environmental impact of <b>surgical</b> healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	1
The impact of <b>anaesthetic</b> gases on the healthcare carbon footprint and ways to reduce anaesthesia’s environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
The impact of <b>inhalers</b> on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
<b>Waste production</b> within healthcare <b>clinics</b> and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1
<p><i>Score explanation:</i></p>	



1. The “Asthma” lecture in year 1 also goes through greener strategies for prescribing inhalers. A fifth-year lecture on “health system change” also discusses over-prescribing and how unused prescriptions have an impact on the environment. The Global Health Part 2 lecture discusses the importance of interventions with co-benefits for chronic disease. In the four-year curriculum, there is a learning outcome “Discuss the role of social prescribing in supporting patients with depression and the possible co-benefits of such interventions.”
2. The “Health Systems Change” lecture discusses over-prescribing and the impact of medical waste and unused prescriptions.
3. The fifth-year lecture on “Health Systems Change” on social prescribing covers this and how social prescribing benefits both the patients and the climate. In the four-year curriculum, there is a learning outcome: “Discuss the role of social prescribing in supporting patients with depression and the possible co-benefits of such interventions.”
4. A lecture in year 5, “Sustainability in Surgery,” highlights the environmental impacts of many aspects of surgery and strategies for improvement.
5. The impact of anaesthetics use on the environment and emissions is discussed within the 5th year “sustainability in surgery” lecture.
6. The “Asthma” lecture from year 1 and “Health Systems Change” lecture in year 5 detail the impact of inhalers on the carbon footprint, and strategies for greener prescribing (e.g., environmental benefits of DPI vs MDIs).
7. Strategies are highlighted within the “health systems change” lecture from year 5, as well as the “Time to Cut Emissions” lecture also from year 5.

### *Curriculum: Clinical Applications*

#### **1.18. In training for patient encounters, does your medical school's curriculum introduce strategies to have conversations with patients about the health effects of climate change?**

Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)

Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)

No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)

Score Assigned:

2

#### *Score explanation:*

Year 1: “Asthma” lecture covers information that clinicians can pass on to patients on which asthma inhalers could suit them more, so they can see which inhalers have a greater impact on the environment using NICE guidelines.

Year 3: Primary care symposium “Clinical Planetary Health” during GP placements covers how environmental and climate factors can influence patients’ health and shows students how they can discuss this with patients. There is a case history (Ella Kissi-Debrah’s case - death due to air pollution) provided for students to work through..

Year 5: “Health Systems Change” lecture covers teaching on how to provide information to patients in regards to selecting more environmentally friendly inhalers.

**1.19. In training for patient encounters, does your medical school's curriculum introduce strategies for taking an environmental history or exposure history?**

Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)

Only **elective** coursework includes strategies for taking an environmental history. (1 point)

No, the curriculum does **not** include strategies for taking an environmental history. (0 points)

Score Assigned:

2

*Score explanation:*

Previously GP seminar leads have been trained on providing environmental history taking teaching. Primary care symposium session during GP Placements in Year 3 highlights how environmental and climate change factors can influence patients' health, and how students can discuss this with patients during their practice. Case studies like Ella Kissi-Debrah's case (death due to air pollution) are provided and discussed.

### ***Curriculum: Administrative Support for Planetary Health***

**1.20. Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?**

Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)

Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)

No, there are **no** improvements to planetary health education in progress. (0 points)

Score Assigned:

4

*Score explanation:*

The university has been making active efforts to improve planetary health education within the faculty of medicine. This has included the employment of a Planetary Health Teaching Fellow and the creation of a planetary health faculty team. They have made many changes to the curriculum. A new Population and Planetary Health core module for year 3 is currently in development. A formal "Students for Planetary Health" group was started in 2023. -This student-led group has been actively raising awareness of planetary health by facilitating research and audits. More students have also been involved in planetary health projects for their 3rd year research projects, and this has been supported and encouraged by the faculty. The Sustainability and Resilience Institute (SRI), created by the University of Southampton, has been actively involved in research and education.

**1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?**

Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)

**Some** planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)

Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s)**. (2 points)

There is **minimal/no** education for sustainable healthcare. (0 points)

Score Assigned:

6

*Score explanation:*

The faculty has outlined its curriculum here:

[Infusing climate change and sustainability into the medical school curriculum - The BMJ](#)

- The Population and Planetary Health module is integrated throughout the medical curriculum, and resources can be accessed by all students on Blackboard.
- The first 2 years serve as an introduction to environmental and planetary health, and focus on public health, including epidemiology, pathophysiology and prevention. This content is included within the various specialties and systems covered, including respiratory, cardiovascular, and infectious disease.
- Years 3 and 4 encompass the transition into clinical practice, and lectures are integrated into the curriculum covering planetary health, including environmental history taking.
- A research module is undertaken in the third year, with some students undertaking planetary health-related research in this year.
- The final year presents a further shift in teaching, designed to encourage graduating doctors to think sustainably as they enter practice. The surgical and primary care modules of the final year both include planetary health-specific content.

**1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?**

**Yes**, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)

**No**, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)

Score Assigned:

1

*Score explanation:*

The faculty of medicine has employed a Planetary Health Teaching Fellow and is one of the first medical schools in the country to do so. He was also involved in creating the student-led Planetary Health group, which has been working to promote planetary health within the student body and encourage research within this field.

**Section Total (67 out of 72)**

**93.06%**

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## Interdisciplinary Research

**Section Overview:** *This section evaluates the quality and quantity of interdisciplinary planetary health research at the broader institution. Interactions between health and the environment are complex and multifactorial. While climate change has been extensively studied from an environmental science perspective, planetary health is an emerging field. As leading health institutions with talented researchers and research resources, institutions should fund research studying the health effects of climate change and anthropogenic environmental toxins. This obligation is particularly strong because the public and policymakers are more attentive to climate change when its implications for human health are emphasised.*

### 2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?

Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)

Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)

There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)

No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)

Score Assigned:

3

#### *Score explanation:*

The University of Southampton has maintained its interest in researching the effects of air pollution and health. Key researchers in this field include a member of the NERC Council and Clear Air Champion. Dr. James Bevan is a senior teaching fellow at Southampton who has been working on promoting planetary health through research studies and working with the faculty of medicine to integrate planetary health teaching into the curriculum. He has published and presented research on planetary health education.

<https://www.southampton.ac.uk/people/5wxvnb/professor-stephen-holgate>

<https://www.ukcleanair.org/about-us/clean-air-champions/>

<https://www.southampton.ac.uk/people/5y9jyd/doctor-james-bevan>

### 2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)

There is <b>not currently</b> a department or institute for interdisciplinary planetary health research, but there are <b>plans</b> to open one in the next 3 years. (2 points)	
There is an <b>Occupational and Environmental Health department</b> , but no interdisciplinary department or institute for planetary health research. (1 points)	
There is <b>no</b> dedicated department or institute. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>The University of Southampton founded the Sustainability and Resilience Institute (SRI) in 2023. This institute is a multi-disciplinary institute that aims to bring together all academic disciplines within the university to tackle public health issues. The main focus areas include renewable energy, climate change and health, nature-based solutions, sustainability methods and UN sustainable development goals. There are currently studies being conducted within this institute with a focus on medicine and health, including environmental health and assessing the impact of transportation noise pollution.</p> <p><a href="https://www.southampton.ac.uk/research/institutes-centres/sustainability-resilience-institute">https://www.southampton.ac.uk/research/institutes-centres/sustainability-resilience-institute</a></p> <p><a href="https://www.southampton.ac.uk/research/institutes-centres/sustainability-resilience-institute/projects">https://www.southampton.ac.uk/research/institutes-centres/sustainability-resilience-institute/projects</a></p>	

<b>2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?</b>	
Yes, there is a process in which community members impacted by climate and environmental injustice have <b>decision-making power</b> in the climate + environmental research agenda. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice <b>advise</b> the climate + environmental research agenda. (2 points)	
<b>No</b> , but there are <b>current efforts</b> to establish a process for community members to advise or make decisions on the research agenda. (1 point)	
There is <b>no</b> process, and <b>no</b> efforts to create such a process. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i></p> <p>Public and Community Engagement Hubs were created by the university to bring together the local voluntary, community and social enterprise sector with the staff, students and researchers at the university. This encourages community input for research projects.</p> <p><a href="https://www.southampton.ac.uk/per/university/pe-hubs.page">https://www.southampton.ac.uk/per/university/pe-hubs.page</a></p>	

The university has undertaken projects that assess the impact of community initiatives on environmental issues, e.g. a study funded by the Economic and Social Research Council (ESRC) evaluated the role of community greening groups in promoting energy-saving measures in housing.

<https://energy.soton.ac.uk/the-role-of-community-based-initiatives-in-energy-saving>

In partnership with other institutions, the university has encouraged stakeholders to co-create sustainable climate change services at the community level. This encourages local perspectives to shape the research and its applications.

<https://www.uds.edu.gh/news/uds-and-the-university-of-southampton-converge-stakeholders-partner-to-co-create-climate-change-solution>

Not many of these are specific to the medical field; however, the university taking initiative to involve the public in research is promising.

#### 2.4. Does your **institution** have a planetary health website that centralises ongoing and past research related to health and the environment?

There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)

There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)

The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)

There is **no** website. (0 points)

Score Assigned:

3

*Score explanation:*

The University of Southampton founded the Sustainability and Resilience Institute (SRI) in 2023. Their website includes information about all the events, leaders in planetary health at the institution.

<https://www.southampton.ac.uk/research/institutes-centres/sustainability-resilience-institute>

#### 2.5. Has your **institution** recently hosted a conference or symposium on topics related to planetary health?

Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)

Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the <b>institution</b> has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The <b>institution</b> has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the <b>institution</b> has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
<p><i>Score explanation:</i></p> <p>The University of Southampton hosted the International Conference on Evolving Cities and Towns (ICEC) conference in September 2024, and is hosting the conference again in July 2025. The Students for Planetary Health Group is planning a planetary health conference in Autumn 2025.</p> <p><a href="https://energy.soton.ac.uk/4th-international-conference-on-evolving-cities/">https://energy.soton.ac.uk/4th-international-conference-on-evolving-cities/</a></p>	

<b>2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation?</b>	
Yes, the institution is a member of a national or international planetary health <b>or</b> ESH/ESV organisation. (1 points)	
No, the institution is <b>not</b> a member of such an organisation. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i></p> <p>The University of Southampton is a founding member of the International Medical Education Collaboration on Climate and Sustainability (IMECCS). This organisation provides educational materials on climate change and sustainability in medicine, and promotes planetary health and public health education in medical schools.</p> <p><a href="https://www.imeccs.org/">https://www.imeccs.org/</a></p> <p>Southampton is also a member of ESH and the European Network on Climate and Health Education.</p>	

<b>Section Total (15 out of 17)</b>	<b>88.24%</b>
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## Community Outreach and Advocacy

***Section Overview:*** This section evaluates medical school engagement in community outreach and advocacy efforts associated with planetary health. Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.

### 3.1. Does your **institution** partner with community organisations to promote planetary and health?

Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)

Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)

The **institution** does not partner with community organisations, but participates in community-focused events relating to planetary health. (1 point)

No, there is **no** such meaningful community partnership. (0 points)

Score Assigned:

3

#### *Score explanation:*

LifeLab is a teaching laboratory dedicated to improving adolescent health by allowing school students to learn the science behind health messages. It was founded by the University of Southampton in 2008. LifeLab also leads research on the developmental origins of health and disease (DOHaD).

<https://www.southampton.ac.uk/research/groups/lifelab>

Planetary Health Senior Teaching Fellow James Bevan is a working group co-chair for the Global Consortium on Climate and Health Education (GCCHE). He regularly co-chairs open sessions for educators around the world to gain advice on how to integrate planetary health and sustainability in the healthcare curricula.

<https://www.publichealth.columbia.edu/research/programs/global-consortium-climate-health-education/events-opportunities>

### 3.2. Does your **institution** offer community-facing courses or events regarding planetary health?

The <b>institution</b> offers community-facing courses or events at least once every year. (3 points)	
The <b>institution</b> offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)	
The <b>institution</b> has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	
The <b>institution</b> has not offered such community-facing courses or events. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>LifeLab, a science education intervention programme is based in Southampton with ties to both the university and the main affiliated teaching hospital. In 2024, they were involved in #GenerationAnthropocene, a youth-led climate action programme. There was also another event hosted by the University of Southampton in 2023, which focused on climate change aimed at sixth formers.</p> <p><a href="https://www.facebook.com/lifelabsouthampton">https://www.facebook.com/lifelabsouthampton</a></p>	

<b>3.3. Does your <u>institution</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?</b>	
Yes, all students <b>regularly</b> receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to <b>some courses</b> . (1 point)	
Students <b>do not</b> receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i></p> <p>Students at the University of Southampton receive occasional emails regarding Sustainability in Healthcare, including opportunities to join the Planetary Health and Sustainability Student Group. Additionally, the Faculty of Medicine sends a weekly newsletter to medical students, which includes findings of medical research conducted at the university and often includes research on planetary health.</p>	

<b>3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?</b>
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Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)	
Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)	
There are <b>no</b> such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> The University Hospital Southampton NHS Trust provides two hours of teaching on planetary health and sustainability to Foundation Year 1 Doctors on the Foundation Programme. Additionally, there is an e-learning module titled Environmentally Sustainable Healthcare on the eLearning for Healthcare website. Medical students at the University of Southampton have access to this online material.	

<b>3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?</b>	
Yes, the <b>institution</b> or <b>all affiliated hospitals</b> have accessible educational materials for patients. (2 points)	
<b>Some</b> affiliated hospitals have accessible educational materials for patients. (1 point)	
<b>No</b> affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> There are a few posts made on Facebook regarding environmental issues e.g. wood burning and small particle air pollution <a href="https://www.facebook.com/uhsft">https://www.facebook.com/uhsft</a>	

<b>3.6. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?</b>	
Yes, the <b>institution</b> or <b>all affiliated hospitals</b> have accessible educational materials for patients. (2 points)	
<b>Some</b> affiliated hospitals have accessible educational materials for patients. (1 point)	
<b>No</b> affiliated hospitals have accessible educational materials for patients. (0 points)	

Score Assigned:	0
<i>Score explanation:</i>  Whilst there are green initiatives being carried out by UHS and other affiliated hospitals, there does not seem to be any education resources targeted towards patients.	

<b>Section Total (10 out of 14)</b>	<b>71.43%</b>
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# Support for Student-Led Planetary Health Initiatives

**Section Overview:** This section evaluates institutional support for student-led planetary health initiatives, such as funding, fellowships, programming, and student groups. Planetary health is a young field and, as young people facing a future deeply shaped by climate change, students are often some of the first at an institution to engage with it. Institutions should provide support for students to engage in sustainability quality improvement (QI) initiatives, discover mentors in their area of interest, and receive funding for planetary health projects.

4.1. Does your <b>institution</b> offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the <b>institution</b> <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum. (2 points)	
The <b>institution</b> encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, <b>but</b> there is no student funding available and there is no requirement to participate. (1 point)	
No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
<p><i>Score Explanation:</i></p> <p>The university is currently developing opportunities and funding for students to undertake sustainable QI projects as part of their year 3 research block. However, at the time of evaluation, there was no funding available for student projects from the faculty of medicine.</p>	

4.2. Does your <b>institution</b> offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The <b>institution</b> has a <b>specific</b> research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these <b>require student initiative</b> to seek these out and carry them out in their spare time. (1 point)	
There are <b>no opportunities</b> for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i></p> <p>The Students for Planetary Health group is regularly engaged in research. This group has published peer-reviewed articles, conducted audits and presented at national and international conferences. The group's research activities are supported and guided by the planetary health teaching fellow.</p>	

The [Sustainability Resilience Institute](#) (SRI) has been established and Student Sustainability Academy Associate, Member and Fellowships will be available upon launch of the Sustainability Academy in February 2024.

This [article](#) summarises the importance of a planetary teaching fellow in reforming the medical school planetary health curriculum for medical students.

**4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.**

The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:

2

*Score explanation:*

The students for planetary health group has recently created an online platform that connects students with clinicians engaged in planetary health and sustainability projects.

There is a Blackboard page for medical students on Population and Planetary Health, with an overview of the different lectures in different years, as well as a reading list and information for staff that students can contact. The page is, however, limited as it doesn't provide an active outline of current projects or initiatives being undertaken.

[Population and Planetary Health](#)

**4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?**

Yes, there is a student organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)

Yes, there is a student organisation at my institution dedicated to planetary health or sustainability in healthcare but it **lacks faculty support**. (1 point)

No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:	2
<p><i>Score explanation:</i>  The university has a “Students for Population and Planetary Health” student society supported by the faculty. All medical students can join this society and be involved in various projects. Students in this society have evaluated the planetary health teaching within the medical curriculum and are also undertaking various other projects with the direct support of our Planetary Health Teaching Fellow.</p>	

<b>4.5. Is there a student liaison representing sustainability interests who serves on a <u>department or institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?</b>	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i>  The University of Southampton’s Student Union president is a member of the Sustainability Implementation Group. This group works alongside the Sustainability Strategy Board to help deliver the University’s Sustainability Strategy.</p> <p><a href="#">Sustainability at Southampton</a></p>	

<b>4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)</b>	<b>Score</b>
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	0
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1

Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<p><i>Score explanation:</i></p> <p>At the University of Southampton, there is a <a href="#">Beekeeping Society</a> which allows students to experience beekeeping and the production of honey, by organising training for hive visits.</p> <p>Additionally, there are opportunities for students to join conservation efforts within the local community and support against anthropogenic environmental impacts with the <a href="#">Southampton University Conservation Volunteers</a></p> <p>The University of Southampton has a <a href="#">Wilderness and Expedition Medicine Society (SWEMS)</a> which hosts group walks and camping trips, alongside talks and teaching events.</p>	
<b>Section Total (10 out of 15)</b>	<b>66.67%</b>

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# Campus Sustainability

**Section Overview:** This section evaluates the support and engagement in sustainability initiatives by the institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.

5.1. Does your <u>institution</u> have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is <b>at least one designated staff member</b> for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but <b>no specific staff member</b> in charge of hospital sustainability. (2 points)	
There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee. (1 point)	
There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>The University of Southampton has a dedicated and established Sustainability Strategy and Delivery team, with a designated “Associate Director of Environment &amp; Sustainability” and a designated “Environment and Sustainability Manager” who work alongside multiple other staff who represent different faculties and different sustainability goals. More information can be found <a href="#">here</a>.</p>	

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?	
The institution has a <b>written and q plan</b> to achieve carbon neutrality by <b>2030</b> (5 points)	
The institution has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2040</b> (3 points)	
The institution has a stated goal of carbon neutrality by <b>2040</b> but has <b>not created a plan</b> to reach that goal or the <b>plan is inadequate</b> (1 point)	
The institution/medical school does <b>not</b> meet any of the requirements listed above (0 points)	
Score Assigned:	5

*Score explanation:*

The University of Southampton is targeting net-zero by 2030 for Scope 1 and Scope 2 emissions. Scope 1 emissions are direct emissions that the university controls, primarily from fuel combustion on the university site. Scope 2 are indirect emissions from electricity that the university buys and uses. More information can be found [here](#).

**5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?**

Yes, institution buildings are **100%** powered by renewable energy. (3 points)

Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)

Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)

Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)

Score Assigned:

1

*Score explanation:*

Information from the most recent report, the [Annual Environmental Management System Review Report 2023-2024](#), alongside the [report from 2022](#), indicates that the university is on a 100% renewable electricity tariff. The recent extension to the Jubilee Sports Hall has a 45kWp solar array installed, and capacity for solar power has been reviewed at all campuses. The university's energy centre contains a gas-fired combined heat and power plant (CHP) that generates electricity and heat. The heat produced from generating electricity is recaptured and utilised to meet over half of the demand for heating the campus. The centre now also has new and more efficient boilers that use less CO2. However, given the large usage of natural gas (primarily for heating), we have scored this metric 1 out of 3. We suggest that the university publish more accessible energy usage figures on its public-facing web pages.

**5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?**

Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)

Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted**. (2 points)

Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)

Sustainability is <b>not considered</b> in the construction of new buildings. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>The University of Southampton has a clear policy regarding new builds, refurbishment and management projects. The university has set out guidelines, including all projects needing to identify opportunities for emission reductions and climate change mitigation, resilience and adaptation, as well as proposals to minimise energy use intensity. However, we were unable to find information regarding the retrofitting of old buildings. More information can be found <a href="#">here</a> and <a href="#">here</a>.</p>	

<b>5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?</b>	
Yes, the institution has implemented strategies to encourage and provide <b>environmentally-friendly transportation options</b> such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented <b>some</b> strategies to provide environmentally-friendly transportation options, but the options are <b>unsatisfactorily</b> accessible or advertised. (1 point)	
The institution has <b>not</b> implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>The University of Southampton provides multiple locations for secure bike storage and runs regular sessions with the Bike Doctor to support cyclists. There is also a scheme to purchase second-hand bikes for a significantly reduced price. The award-winning bus service UniLink reduces the need for staff and students to drive to campus. Students in University accommodation are given a free bus pass. Staff who do need to drive are incentivised to carshare and use low-emission vehicles through a parking permit scheme. New charging points allow people to charge their electric vehicles on campus. Overall, the university has implemented several strategies to encourage and provide environmentally-friendly transportation options and has adopted a Travel Plan that has been reviewed almost every year since 2007. See <a href="#">here</a> for more information, and <a href="#">here</a> for the Travel Plan 2023-24.</p>	

<b>5.6. Does your <u>institution</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?</b>	
Yes, the institution has <b>both</b> compost <b>and</b> recycling programs accessible to students and faculty. (2 points)	

The institution has <b>either</b> recycling <b>or</b> compost programs accessible to students and faculty, but not both. (1 point)	
There is <b>no</b> compost or recycling program at the institution. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>The University of Southampton's buildings all have multiple two-bin recycling systems located in convenient locations around the campus for food and clean waste. The mixed waste is sorted at a materials recycling facility - anything that cannot be recycled is sent to an 'energy from waste' facility so that electricity and heat can be recovered. Food waste is sent for anaerobic digestion, which breaks down biodegradable materials using microorganisms, producing gases that can be used to generate electricity and heat. The leftover materials are used as a soil conditioner and fertiliser. More information can be found <a href="#">here</a>.</p>	

<b>5.7. Does the <u>institution</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?</b>	
Yes, the institution has <b>adequate</b> sustainability requirements for food and beverages, including meat-free days or no red-meat, and <b>is engaged</b> in efforts to increase food and beverage sustainability. (3 points)	
There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The institution <b>is engaged</b> in efforts to increase food and beverage sustainability. (2 points)	
There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The institution is <b>not</b> engaged in efforts to increase food and beverage sustainability. (1 point)	
There are <b>no</b> sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>The University of Southampton has made efforts to make food and beverage selections sustainable. Local and seasonal produce is readily available in cafes and restaurants across campus. The Arlott Cafe is a palm oil-free location (with attempts to make other cafes palm oil-free as well), products with beef are being reduced or entirely removed from menus and all catering outlets are required to offer a minimum of 30% vegan and vegetarian options to provide choice and promote a change from a meat-heavy diet. Additionally, the "bring your own reusable cup" scheme incentivises</p>	

customers to reduce one-off waste by discounting their hot drink and the “Too Good To Go” scheme offers leftover food at a heavily discounted rate to reduce food waste. More information can be found [here](#).

**5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?**

Yes, the institution has **adequate** sustainability requirements for supply procurement **and is engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:

3

*Score explanation:*

The procurement team at the University of Southampton uses a Flexible Framework tool for supply procurement and is fully committed to increasing the sustainability of procurement. More information can be found [here](#).

**5.9. Are there sustainability requirements or guidelines for events hosted at the institution?**

Every event hosted at the institution **must** abide by sustainability criteria. (2 points)

The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required**. (1 point)

There are **no** sustainability guidelines for institution events. (0 points)

Score Assigned:

1

*Score explanation:*

The University of Southampton strongly encourages sustainability measures for events hosted by the institution. Events are not approved unless more sustainable options have been explored; however, there is no strict criteria for this at the moment. See [here](#) for more information.

**5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?**

Yes, the institution has <b>programs</b> and <b>initiatives</b> to assist with making lab spaces more environmentally sustainable. (2 points)	
There are <b>guidelines</b> on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are <b>no</b> efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> The University of Southampton has a <a href="#">Sustainable Buildings Policy</a> , which includes designing all laboratories to minimise energy and water consumption and waste production. Additionally, the university's <a href="#">Sustainability Report 2023-24</a> indicates a goal to ensure that laboratories are audited and accredited as required and that staff are trained to procure sustainable equipment. However, there was limited information available regarding specific programs or initiatives to make lab spaces more environmentally stable.	

5.11. Does your <b>institution's</b> endowment portfolio investments include fossil-fuel companies?	
The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is <b>entirely divested</b> from fossil fuels. (3 points)	
The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments. (2 points)	
The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organised advocacy</b> for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> The University of Southampton is committed to divesting from fossil fuels and investing in line with the Paris Agreement. A fossil fuel exposure audit was completed by the university, following which a sustainable ethical investment policy was put in place. The audit highlighted how in 2023, 1% of the University's total investments were in direct fossil fuel companies, with lower levels of exposure (0.4%) in indirect fossil fuel companies. The overall reduction in fossil fuel holdings over recent years is a result of active engagement by fund managers to invest responsibly in companies and industries that make a positive impact on environmental, social and governance factors. Click here to view the <a href="#">Fossil Fuel Statement 2023</a> and the <a href="#">University of Southampton Sustainability Report</a> .	

Section Total (25 out of 32)	78.1%
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Back to Summary Page [here](#)

# Grading

## Section Overview

This section focuses on the grading of the report card. The institution received a grade for each of the individual sections as well as an overall institutional grade. Section point totals were tallied, divided by the total points available for the section, and converted to a percentage. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics. Letter grades for each section and the institution overall were then assigned according to the table below.

Letter Grade*	Percentage
A	80% - 100%
B	60% - 79%
C	40% - 59%
D	20% - 39%
F	0% - 19%

## Planetary Health Grades for the University of Southampton School of Medicine

The following table presents the individual section grades and overall institutional grade for the University of Southampton School of Medicine on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(67/72) \times 100 = 93.06\%$	A
<b>Interdisciplinary Research (17.5%)</b>	$(15/17) \times 100 = 88.24\%$	A
<b>Community Outreach and Advocacy (17.5%)</b>	$(10/14) \times 100 = 71.43\%$	B
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(10/15) \times 100 = 66.67\%$	B
<b>Campus Sustainability (17.5%)</b>	$(25/32) \times 100 = 78.13\%$	B+
<b>Institutional Grade</b>	85.33%	A



# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which the University of Southampton has participated in the Planetary Health Report Card initiative.

