



Planetary Health Report Card (Medicine):

*Creighton University SOM - Phoenix
Health Science Campus*

Creighton
UNIVERSITY

School of Medicine

2024-2025 Contributing Team:

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Land Acknowledgment

We acknowledge that the Creighton University Phoenix Health Sciences Campus resides on the ancestral lands of the Hohokam people, the Akimel O'odham (Pima) people, the Piipaash (Maricopa) people, the Yavapai people, and the Yaqui people who have stewarded this land for generations with respect for its ecosystems and biodiversity. We honor their enduring relationship with the region and their wisdom in caring for its resources. We are grateful for the opportunity to work, learn, and grow on this land.

Summary of Findings

Overall Grade	B
<u>Curriculum</u>	B-
<ul style="list-style-type: none"> • The Creighton University School of Medicine Phoenix (CUSOM-PHX) curriculum incorporates planetary health sporadically. The majority of planetary health education occurs during two lectures in students' first year, with limited opportunities to apply the information or build upon that knowledge in following years. • Recommendations: We recommend a longitudinal approach to integration of climate change's effect on health, with integrated discussion of the intrinsic link between human health and planetary health in each organ system block. Overarching topics, such as Indigenous knowledge and value systems, disparities in exposure to extreme climate events and environmental toxins, and the global effects of planetary health should also be covered longitudinally through the preclinical and clinical curriculum. 	
<u>Interdisciplinary Research</u>	B-
<ul style="list-style-type: none"> • CUSOM-PHX has very little research activity surrounding planetary health and sustainable healthcare. Most of the resources that the institution has is less accessible to students in Phoenix. • Recommendations: We recommend the school identify specific faculty members or physicians in Phoenix who can advise students about research surrounding planetary health and sustainable healthcare. Ideally, a small department surrounding interdisciplinary planetary health research could be created. We also continue to encourage involvement of community members in planetary health and sustainable healthcare research. 	
<u>Community Outreach and Advocacy</u>	B-
<ul style="list-style-type: none"> • CUSOM-PHX offers multiple opportunities for students and staff to be involved in planetary health, including post-graduate education through workshops and lectures, and opportunities to be involved at an annual conference. • Recommendations: We recommend partnering with more local community organizations. Additionally, we recommend providing routine communication regarding planetary health to all classes and creating accessible information regarding health impacts of climate change, sustainable healthcare, and environmental health exposures available to patients online.. 	
<u>Support for Student-Led Initiatives</u>	A
<ul style="list-style-type: none"> • CUSOM-PHX has many opportunities for student-led initiatives in planetary health, including a Planetary Health & Sustainability Task Force, Sustainability Chair positions within medical student class government, and a Creighton Student Sustainability Action Fund that provides grants for sustainability programming. • Recommendations: We recommend development of planetary health specific webpages to showcase sustainable healthcare opportunities in Phoenix and creation of a registry with contact information of Phoenix-based faculty interested in mentoring and collaborating with students in planetary health research. 	
<u>Campus Sustainability</u>	C
<ul style="list-style-type: none"> • Creighton University (CU) has thorough and thoughtful efforts geared towards campus sustainability at its home campus in Omaha, but has yet to implement comprehensive initiatives to the Phoenix Health Sciences Campus (PHSC). • Recommendations: We encourage CU to continue efforts of following the Laudato Si' mission of fulfilling our moral obligation to protect our common home. Areas of particular interest would be aggressive efforts to reach a neutral carbon footprint as soon as possible, publicly sharing clear and specific updates about sustainability efforts, and making sustainability requirements for institution functioning. 	

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

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. (1 points)	
No, the medical school has not 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: CUSOM-OMA currently offers a four-week long elective course to fourth year medical students titled “Planetary Health”. This elective covers principles in ecopsychology, indigenous perspectives. Students should leave this elective with an understanding of how connection with nature can improve both their patients’ health and their own practice as physicians.</i></p> <p><i>The Arrupe Global Scholars Program is a 5-year MD/MPH program that allows students to pursue a dual degree and learn about global health and health equity. There are two courses (MPH 640 and MPH 64) that these students take that surround Environmental Health and Planetary Health.</i></p> <p><i>Recommendations:</i> We recommend that CUSOM once again offer courses that have been removed from course options for electives: “Intersections Between Food Security, Climate Change, and Public Health” and “Ecospirituality.” We also recommend that such courses be offered at both CUSOM-OMA and CUSOM-PHX.</p>	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> 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
<p><i>Score explanation: First year medical students receive 2 lectures addressing the relationship between extreme heat, health risks, and climate change. The lectures are taught as part of the Gold Track (Social Context of Care) curriculum, which covers topics related to the social context of care. These lectures are titled: "Introduction to Planetary Health" and "Planetary Health". "Introduction to Planetary Health" only covers these topics in the mandatory pre-work for the lecture. "Planetary Health" places special emphasis on the particular impact that heat-related injuries have on the Phoenix patient population. This lecture explores the incidence of heat related injuries, risk factors (ex: unsupervised children, drug intoxication, etc), and preventative education. The lecture also provides specific information on the range of surface temperatures by neighborhood in the Phoenix area.</i></p> <p><i>The topic is also briefly covered during the first year Case Based Learning (CBL) activity titled "Dante's Inferno", which includes several questions about wildfires and their connection to health and climate change. The second year CBL activity titled "Hot Wheels," also presents students with a case regarding a patient experiencing heat illness. This case also addresses risk factors that increase incidence of heat stroke and related injuries, and explores how extrinsic and structural factors influence risk. The case briefly explores the impact of extreme weather and urban heat islands.</i></p> <p>Recommendations: <i>We continue to recommend that this topic be covered in depth during the lecture rather than only in the pre-work.</i></p>	

1.3. Does your <u>medical school</u> 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
<p><i>Score explanation: Impact of extreme weather on health is explored in the Gold Track lecture titled: "Introduction to Planetary Health." Before the session, students watch an informational video titled "Climate 101: What Every Clinician Needs to Know". This video discusses direct and indirect effects of climate change, specifically storm/climate refugees and the effects of extreme weather events on healthcare systems and supply chains. This is also covered again in the additional lecture, "Planetary Health". The Planetary Health lecture explored how climate change and pollution threaten health. The ways in which they exacerbate health disparities, and incidence of COPD, Asthma, and Allergy. The lecture instructed on the role of PM2.5 and other airborne pollutants in disease burden. Additionally, the lecture addressed the role of the health care industry in climate change, and potential opportunities for advocacy and intervention.</i></p>	

Recommendations: We continue to recommend that this topic be covered in depth during the lecture rather than only in the pre-work.

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: The relationship between public health and climate change is briefly explored during the M1 curriculum during the Infectious Disease block. Lecturers explore the risks and impact of Coccidioidomycosis “Valley Fever”, and explain that changes in temperature may expand the endemic region. It is also mentioned in the “Vaccines” lecture that influenza serotypes are constantly fluctuating due to environmental changes. Health impacts of climate change are also briefly covered during the M2 Multisystem Disease curriculum. In the Infectious Disease lecture, the professor touches on how flooding can increase infection rates. While the lectures in the M1 and M2 curriculum briefly explore the relationship between public health and climate change, they don’t provide in-depth information on how extreme heat and climate change may have long-term effects on health and chronic conditions. The lectures offer brief information on the current situation, but don’t explore the future or provide education for prevention.

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 points)

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

Score Assigned:

3

Score explanation: The “Introduction to Planetary Health” lecture includes a required preparatory video titled “Climate 101: What Every Clinician Needs to Know”. This covers topics related to respiratory health, such as particulate pollution related to forest fires, the effects of air pollutants on respiratory conditions like asthma, and increased COVID-19 mortality as it relates to health equity. The Planetary Health lecture explored how climate change and pollution threaten health, the ways in which they exacerbate health disparities, and incidence of COPD, Asthma, and Allergy. The lecture instructed on the role of PM2.5 and other airborne pollutants in disease burden.

During the Respiratory Block, exposure to air pollutants was discussed as a component affecting lung diseases, including chronic obstructive pulmonary disease and asthma.

Recommendations: *We continue to recommend that this topic be covered in depth during the lecture rather than only in the pre-work.*

1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat

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 points)

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

Score Assigned:

3

Score explanation: The lecture “Planetary Health” briefly explores the relationship between cardiovascular health and climate change in various lecture slides. Additionally, this topic is part of the Case Based Learning assignment on Hypothermia and Hyperthermia during the M2 Multisystem Disease curriculum. The CBL explores extreme heat’s impact on the risk of arrhythmias, but did not mention increasing rates of cardiovascular events parallel to climate change. This topic is not addressed during the Cardiology system block in the Spring of M1 year.

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 points)

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

Score Assigned:

2

Score explanation: The lecture “Planetary Health” briefly explores the relationship between mental health and climate change, specifically mentioning the link between increased temperatures, decreased quality of sleep, and increased incidence of psychological illnesses. This topic was not addressed at all during the Brain and Behavior (psychiatry) system block.

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 points)	
This topic was not covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation: The lecture “Planetary Health” briefly explores the impact of food and water insecurity on population health. The lecture includes information on the current water crisis in Arizona, and how increasing temperatures from climate change will exacerbate the current issue. This topic is also explored during the M3 curriculum during the Family Medicine clerkship’s Gold Track sessions. During the rotation, students are assigned an essay which explores their understanding of social determinants of health, and how they have seen it manifest in their patients. Additionally, during another Gold Track lecture on homelessness, students participate in an online quiz called SPENT which is a role playing simulation of living on a low income. Participants have to make various choices on how to spend their money, with the goal of making it to the end of the month off of a meager paycheck. This simulation was then discussed at length in class, and explored how low income affects patients’ diet, medication compliance, and ability to exercise.</i></p>	

1.9. Does your <u>medical school</u> 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 points)	
This topic was not covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation: The disproportionate impact on marginalized populations is discussed in the lecture titled “Planetary Health.” The lecture provides information on how vulnerable populations, particularly the unhoused and those experiencing substance use disorder, are disproportionately negatively impacted by climate change. The lecture explores how extreme heat can lead to heat stroke and burns in this population. Lastly, this topic is discussed in the Multisystem Disease block in the Case Based Learning assignment discussing hyperthermia. The CBL explored how homeless populations and elderly adults are at increased risk for heat-related illness.</i></p>	

1.10. Does your <u>medical school</u> 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 points)	
This topic was not covered. (0 points)	
Score Assigned:	1
<p><i>Score explanation: The CUSOM-PHX regular MD curriculum does not currently include this topic. However, the elective MD/MPH pathway, the Arrupe Global Scholars Program, allows students to take two courses (MPH 640 and MPH 64) which discuss the differential impact of climate change on certain communities in local, national, and global settings.</i></p> <p>Recommendations: We continue to recommend that this subject be addressed in Gold Track lectures for all students, outside of just through the Arrupe Global Scholars Program.</p>	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
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 points)	
This topic was not covered. (0 points)	
Score Assigned:	0
<p><i>Score explanation: Reproductive health-effects of anthropogenic environmental toxins are not currently discussed in the CUSOM-PHX curriculum.</i></p> <p>Recommendations: These topics could be included during the Reproductive System or Multisystem Disease blocks.</p>	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
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 points)	
This topic was not covered. (0 points)	
Score Assigned:	2

Score explanation: This topic is covered during a lecture titled “Service Learning: Social Determinants Underlying Academic Service Learning”, which focuses on the impact of childhood lead exposure but also discusses environmental justice in general. The lecture also includes an activity where students compare several health metrics (life expectancy, preterm birth, cardiovascular disease, etc.) between different zip codes within Arizona. The "Planetary Health" lecture also highlights the rising rates of asthma among low socioeconomic status groups, Hispanic and African American communities, and children.

Recommendations: *We believe students would benefit from more targeted discussion specifically of the link between human-caused environmental threats and our local community.*

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 points)

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

Score Assigned:

0

Score explanation: This topic is not yet addressed in the Creighton SOM-PHX curriculum. The Gila River Indian Community, Ak-Chin Indian Community, Tohono O'odham Indian Community, and Colorado River Indian Reservation are all located near the Phoenix regional campus, and represent excellent opportunities for students to learn from Indigenous knowledge and build skills to care for and engage with members of their local community. There are also optional extracurricular opportunities for Creighton students to connect with local Indigenous groups by volunteering to work in their community gardens.

Recommendations: *We recommend that these topics be longitudinally integrated into the Green Track (Clinical Skills and Experiences) and Gold Track (Social Context of Care) curriculum.*

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 points)

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

Score Assigned:

2

Score explanation: The lecture “Service Learning: Social Determinants Underlying Academic Service Learning” discusses Environmental Justice and explores how certain populations are more likely to be exposed to the negative effects of environmental toxins and occupational hazards and prevented from accessing necessities such as safe drinking water, affordable housing, and green space. This lecture is particularly focused on lead exposure and explores distributions of lead exposure in local communities close to Creighton SOM-PHX and OMA. Additionally, discussions on environmental and social determinants of health are incorporated throughout the systems-based curriculum.

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 points)

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

Score Assigned:

2

Score explanation: Insert explanation here.

The health and environmental benefits of a plant-based diet are briefly addressed in a single slide of the “Planetary Health” lecture. The lecture mentions how a plant based diet reduces the burden of greenhouse gases and environmental pollution, but doesn’t go in depth. We encourage faculty to increase the information provided and explore the benefits and misconceptions of plant-based diet more in-depth. The health benefits of a plant based or vegan diet are also explored in the “Nutrition” lecture during MSD, which states that these diets reduce the incidence of heart disease, obesity, cancer, etc.

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 points)

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

Score Assigned:

2

Score explanation: The “Planetary Health” lecture addresses the carbon footprint of healthcare systems. The lecture discusses emissions created by healthcare systems, waste within healthcare, and inefficient use of resources. In addition to this, we recommend that the Green Track (Clinical

Skills and Experiences) curriculum also incorporate actionable strategies to reduce waste in the healthcare setting.

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 and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment (2 points)	0
The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfil this metric. (2 points)	0
The health and environmental co-benefits of non-pharmaceutical management 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)	0
Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of anaesthetic 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)	0
The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
Waste production within healthcare clinics 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: Throughout the curriculum, Creighton faculty emphasize the dangers of overmedicalization, and the importance of treating patients comprehensively. During the Endocrine block, students learn about medications for diabetes and weight loss, while emphasising the importance of smoking cessation, regular exercise, and healthy eating. In the Brain & Behavior block (psychiatry), the curriculum includes information on treating depression, anxiety, psychosis, ADHD, etc using medications, but mainly focuses on prevention via avoidance of substance use, and treatment via CBT or other interpersonal therapies. However, the emphasis on preventing overmedicalization is usually not connected to preserving planetary health. Additionally, the aforementioned Gold Track lecture on "Planetary Health" explores the environmental impact of the healthcare system in terms of waste generation, misuse of resources, and pollutant emissions.</i></p> <p><i>The current curriculum does not include any information on the environmental impact of pharmaceuticals, inhalers, surgical intervention, or anesthetic gases.</i></p>	

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:	0
<i>Score explanation: Students are not currently taught how to discuss climate-related health issues with patients. We recommend adding this to the Green Track (Clinical Skills and Experiences) curriculum for first and second year students.</i>	

1.19. In training for patient encounters, does your <u>medical school's</u> 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
<i>Score explanation: During the Renal block taught in the M2 curriculum, students are taught to take a thorough history including the age of a patient's home and what region they grew up in to collect information about possible exposures to lead, asbestos, and water or respiratory pollutants. This is incorporated into the Green Track (Clinical Skills and Experiences) curriculum, in which students practice patient interviewing. Students are also taught to assess social factors, such as occupational exposures or a history of homelessness.</i>	

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> 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: At the Creighton University School of Medicine in Phoenix, faculty and students are collaborating to improve planetary health education. During the 2024-2025 academic year, Gold Track (Social Context of Care) curriculum faculty had several collaborative meetings with student leaders to discuss student feedback on the efficiency of the curriculum, including the lectures pertaining to “Planetary Health” and “Intro to Planetary Health”. One outcome of these meetings was the creation of a faculty rubric to guide lecturers to teach content that is current, inclusive, and engaging. Additionally, CUSOM-PHX has a Planetary Health and Sustainability Task Force with a specific Curriculum-focused team which collaborates with a parallel group based in Omaha. This group is currently working on incorporating planetary health education into Case Based Learning sessions which are mandatory for students across both the Phoenix and Omaha campuses.

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:

4

Score explanation: As mentioned in metrics 1.1-1.4, Creighton’s Gold Track (Social Context of Care) curriculum integrates several lectures on Planetary Health. Additionally, throughout the curriculum, instructors thoroughly explore the relationship between social determinants of health and health outcomes. Students receive information on disease risk factors throughout numerous classes, and explore the factors impacting marginalized communities in the Gold Track classes. These concepts are integrated throughout the curriculum; however, the education fails to incorporate specifics on health impacts. The curriculum doesn’t provide concrete examples of how particular diseases/infections have been impacted by climate change, national disasters, or resource scarcity. The Creighton curriculum would benefit from adding more specific information throughout each system block. For example, including a lecture on air pollution and COPD rates in the local region during the Pulmonary Block, or specific information on water pollution’s impact on Renal health and chronic disease. The curriculum provides students with the information and tools to connect the information and draw their own conclusions, but doesn’t provide them with specific case studies or concrete examples.

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:

0

Score explanation: Creighton University School of Medicine in Phoenix does not employ a faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. The clinicians who include climate change information in their lectures provide information from their own research.

Section Total (45 out of 72)

62.50%

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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 <u>institution</u>?	
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:	2
<p><i>Score explanation: There is a faculty member at the Creighton School of Medicine on the Phoenix Regional Campus that engages in research surrounding the mechanism behind environmental risk factors and neurotoxicity in Parkinson's Disease.</i></p> <p>Recommendations: We recommend that additional faculty in Phoenix be recruited to engage in planetary health projects.</p>	

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?	
There is at least one dedicated department or institute for interdisciplinary planetary health research. (3 points)	
There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years. (2 points)	
There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research. (1 points)	
There is no dedicated department or institute. (0 points)	

Score Assigned:	1
<p><i>Score explanation: In 2022, the Sustainable Creighton Initiative was formed which focuses on the United Nations Sustainable Health Goals. It includes the Phoenix campus, however a focus on research in Phoenix is not included. This initiative could assist in the creation of a planetary research department in Phoenix, in addition to Creighton's Environmental Health & Safety department.</i></p> <p>Recommendations: <i>We recommend that a department for interdisciplinary planetary health be created specifically to support the Phoenix campus.</i></p>	

<p>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?</p>	
<p>Yes, there is a process in which community members impacted by climate and environmental injustice have decision-making power in the climate + environmental research agenda. (3 points)</p>	
<p>Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda. (2 points)</p>	
<p>No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda. (1 points)</p>	
<p>There is no process, and no efforts to create such a process. (0 points)</p>	
Score Assigned:	0
<p><i>Score explanation: At this time, Creighton School of Medicine in Phoenix has not established an avenue for community members to advise or make decisions on the research agenda. However, there is a growing focus on students' involvement in the community through service work.</i></p>	

<p>2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?</p>	
<p>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)</p>	
<p>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)</p>	
<p>The institution has an Office of Sustainability website that includes some resources related to health and the environment. (1 point)</p>	
<p>There is no website. (0 points)</p>	
Score Assigned:	3

Score explanation: Creighton University has a website specific to the [Sustainable Creighton](#) initiative. This site hosts information about undergraduate programs, the Sustainability Impact Report, the Creighton Student Sustainability Action Fund, and other sustainable efforts by the college. There is not a specific webpage associated with the Phoenix regional campus, which could be a potential way to improve access to and awareness of planetary health research for students in Phoenix. This could also be an opportunity to help connect students to potential mentors.

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 **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)

Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)

The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)

No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)

Score Assigned:

4

Score explanation: Each year, Creighton University's Omaha campus hosts the Global Health Conference Midwest. Planetary health is included as part of the focus of the conference. Zoom links were provided for students in Phoenix to attend and participate. This year, there was a theme of "Reframing our Homes: People, Places and the Planet".

Recommendations: *Creighton University also hosts a conference with the Great Plains Native American Health Symposium. This theme includes "Amplifying Indigenous Voices in Medicine", which could not only be an avenue to increase planetary health research at the institution but also to incorporate various communities opinions and input on Creighton's environmental research agenda (box 2.3 above).*

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?

Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)

No, the institution is **not** a member of such an organisation. (0 points)

Score Assigned:

1

Score explanation: Since 2021, the Creighton School of Medicine has been a part of the Global Consortium on Climate and Health Education.

Section Total (11 out of 17)

64.71%

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Community Outreach and Advocacy

Section Overview: *This section evaluates institutional 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 <u>institution</u> 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
<p><i>Score explanation: The medical school collaborates with Mesa Farms through The Society of St. Vincent de Paul, where medical students participate in volunteer work and learn about sustainable farming practices. This initiative aims to equip students with the skills to grow their own food in an environmentally-friendly way while enhancing access to nutritious food.</i></p> <p><i>As an institute Creighton University, through the Schlegel Center for Service and Justice, has offered environmental justice themed community orientations and service trips.</i></p>	

3.2. Does your <u>institution</u> offer community-facing courses or events regarding planetary health?	
The institution offers community-facing courses or events at least once every year. (3 points)	
The institution 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 institution has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	
The institution has not offered such community-facing courses or events. (0 points)	

Score Assigned:	3
<p><i>Score explanation: As an institution, Creighton University in Omaha, Nebraska hosts the Global Health Conference Midwest annually. The conference brings awareness to local and global health disparities through education, advocacy and service. This year's theme was Reframing our Homes: People, Places, and the Planet, and it included a keynote speaker presenting on "Planetary Health: The Urgency of Now". The event in Omaha included a Community Fair, which featured dozens of organizations working in the realm of social justice and health equity. The conference also featured research from CUSOM-PHX students and offered a virtual option to allow participation at the Phoenix campus. This event was open to the community and was advertised to students in multiple health professional programs at Creighton.</i></p>	

<p>3.3. Does your <u>institution</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?</p>	
<p>Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)</p>	
<p>Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to some courses. (1 point)</p>	
<p>Students do not receive communications about planetary health or sustainable healthcare. (0 points)</p>	
Score Assigned:	1
<p><i>Score explanation: Information and updates regarding sustainability at CUSOM-PHX is routinely included in the email newsletter to the second year class. Otherwise, information is not routinely provided and is periodically included in communications to the student body.</i></p>	

<p>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?</p>	
<p>Yes, the institution or main affiliated hospital trust 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)</p>	
<p>Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)</p>	
<p>There are no such accessible courses for post-graduate providers. (0 points)</p>	
Score Assigned:	2
<p><i>Score explanation: At CUSOM-PHX, a mini workshop was offered in November 2024, introducing faculty to the meaning and use of United Nation's (UN's) Sustainable Development Goals (SDGs)</i></p>	

as they relate to curriculum. This introduced faculty to the meaning and language of SDGs and explored relationships with pre-existing courses at CUSOM-PHX. Additionally, at the Global Health Conference Midwest hosted by Creighton University in Omaha, Nebraska, a keynote presentation titled “Planetary Health: The Urgency of Now” was offered for IPE credit virtually or in-person.

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?

Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned: 0

Score explanation: Educational resources on environmental health exposures are not easily accessible to patients. While Dignity Health sets annual targets for reducing mercury in its hospitals, the emphasis is mainly on toxin removal and does not include detailed educational materials on the effects of toxins on health. We suggest enhancing and clarifying these goals, ensuring they are communicated in a way that is easily understandable for all patients.

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?

Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned: 0

Score explanation: There are no accessible educational materials for patients regarding the health impacts of climate change. We recommend providing materials about climate change and its health impacts for patients to review both on-site and online.

Section Total (9 out of 14)

64.29%

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At the Creighton University undergraduate program, there is a 3-week program, [The Water Quality Program](#), that is open to all students. It involves spending time visiting rural campos in the

Dominican Republic to collect and analyze water samples to identify and correct problems with in-home water filters. Students then return to the campo to explain the results and share recommendations. This program works closely with the Dominicans to impact the current and future health of rural communities.

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 <u>institution</u> offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the institution <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 institution encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but 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:	2
<p><i>Score explanation: Creighton University offers funding for medical students interested in sustainability and planetary health projects through the Creighton Student Sustainability Action Fund (CSSAF). For the past 3 years, this funding has supported the annual Sustainability Week, a week-long event series for students on the Phoenix CUSOM campus. CSSAF has also supported a number of other events, including a clothing mending event, a tote bag painting event, and a free menstrual cup distribution.</i></p>	

4.2. Does your <u>institution</u> offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The institution has a specific 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 require student initiative to seek these out and carry them out in their spare time. (1 point)	
There are no opportunities for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	1
<p><i>Score explanation: Creighton University School of Medicine funds a Summer Research Program for students between their first and second years. Phoenix CUSOM employs a Program Manager</i></p>	

for Clinical Research who assists students in identifying possible mentors for the program. However, in order to get involved in this program, students are required to connect with mentors on their own initiative. The process is similar for students who want to get involved in research outside of this program. While students are encouraged to find research projects in any field, Phoenix CUSOM does not have any programs or resources specific to students interested in doing planetary health and sustainable healthcare research.

Recommendations: We continue to recommend expansion of programs and incentives for students interested in planetary health and sustainable healthcare research.

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 institutional webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the institution, 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:

1

Score explanation: While Phoenix CUSOM has a website dedicated to helping students identify faculty mentors and ongoing projects ([Faculty Mentor List](#)), this webpage does not include any mentors who are involved in planetary health or sustainable healthcare projects. Similarly, while there is a general webpage dedicated to sustainable projects at Creighton ([Sustainable Creighton](#)) this site lacks contact information of potential mentors and does not provide information specific to the School of Medicine or to the Phoenix campus.

Recommendations: We continue to encourage the development of a faculty mentor list of mentors willing to work with medical students on planetary health projects.

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 medical school 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: In fall of 2022, the Creighton University School of Medicine Planetary Health and Sustainability Task Force established a student-lead branch on the Phoenix campus. This group collaborates with its Omaha counterpart on various projects, including inviting planetary health speakers to our Professional Development Sessions in Phoenix. Despite these developments, the Phoenix branch continues to face barriers in creating connections with local faculty, but depends heavily on the guidance and supervision of faculty in Omaha. Efforts to establish faculty involvement on the Phoenix campus are ongoing.</i></p>	

<p>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?</p>	
<p>Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)</p>	
<p>No, there is no such student representative. (0 points)</p>	
Score Assigned:	1
<p><i>Score explanation: Each medical student class on the Phoenix campus has one or two Sustainability Chairs on student government. Additionally, the Planetary Health and Sustainability Task Force has two Planetary Health Curriculum Leads. These students advocate for sustainable practices on campus, develop and host events and programming related to sustainability, and advocate for curriculum reform within medical education. Each of these student positions was created to encourage innovation in planetary health curriculum, research, and student programs.</i></p>	

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)	Score
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.	1
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.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1
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

Score explanation:

- 1. Phoenix CUSOM students have the opportunity to volunteer with the St. Vincent de Paul Mesa Urban Farm. Mesa Urban Farm provides fresh, organic produce to local individuals facing homelessness and food insecurity.*
- 2. The School of Medicine and Office of Continuing Education hosted the inaugural Laudato si' Distinguished Lecture, titled "Health Professional Action in the Climate Crisis." This lecture discussed climate impacts on health and how healthcare professionals are called to action. The Creighton Student Sustainability Action Fund also supported a tote bag painting event where students learned about single use plastic and were encouraged to find alternatives.*
- 3. Phoenix CUSOM Sustainability Chairs hosted Sustainability Week 2025 from February 12th-18th. This week-long event series promoted and encouraged environmentally friendly transportation, waste reduction practices, and environmental action among students. This event series was funded by CSSAF and involved partnership and donations from a local environmental organization.*
- 4. Supported by the Institute for Population Health and the Kingfisher Institute, Creighton participates in the Envisioning Population Health Student Photo Contest, which had multiple categories for submission, including Social Determinants of Health and Planetary Health.*
- 5. Street Medicine is a student-run organization at Phoenix CUSOM provides resources and water to unhoused individuals in the area who are impacted by extreme heat.*
- 6. The Wilderness Medicine Club volunteers for the annual Arizona Wilderness Life Support Course and is involved in the Medical Wilderness Adventure Race. Both the Running Club and Medicine in Motion host running events outdoors. The Climbing Club explores local outdoor rock climbing locations.*

Section Total (13 out of 15)

86.67%

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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 at least one designated staff member 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 no specific staff member in charge of hospital sustainability. (2 points)	
There are no salaried sustainability staff , but there is a sustainability task force or committee. (1 point)	
There are no staff members or task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	2
<p><i>Score explanation: Creighton University's (CU) Office of Sustainability Programs (OSP) is composed of three full-time staff members, numerous student representatives, and committee members. However, none of these individuals are specifically responsible for hospital sustainability. While other campus operations divisions facilitate CU's sustainability efforts, there does not appear to be hospital sustainability staff in any division. Furthermore, it is unclear whether affiliate hospitals employ sustainability staff who collaborate with CU's OSP to fulfill these responsibilities.</i></p> <p>Recommendations: <i>We encourage the implementation of a hospital sustainability staff member, or equivalent, by expansion of a current staff member's role and/or partnership with sustainability personnel at affiliate hospitals. This is especially relevant given the large number of health science students CU trains across the institution.</i></p>	

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?	
The institution has a written and approved plan to achieve carbon neutrality by 2030 (5 points)	
The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)	

The institution has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate (1 point)	
The institution does not meet any of the requirements listed above (0 points)	
Score Assigned:	0
<p><i>Score explanation: The 2022 Sustainable Creighton Initiative (SCI) outlines CU's plan to achieve a 50% reduction in emissions by 2028 and carbon neutrality before 2050. Additionally, the OSP is reportedly continuing to plan for lowering this target date. While the initiative makes projections, it does not specify the exact year by which carbon neutrality will be achieved.</i></p> <p>Recommendations: We encourage the OSP to release an update to the above initiative that specifically addresses the institution's plans to reach carbon neutrality. Further, a more ambitious sustainability plan is pertinent to fostering robust, community-wide sustainability mindsets and practices that will help prevent irreparable climate change.</p>	

5.3. Do buildings/infrastructure used by the <u>institution</u> 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:	0
<p><i>Score explanation: CU in Omaha (CU-OMA) utilizes on-site renewable energy in the form of solar power. However, CU-OMA's energy consumption far exceeds the generation, as renewable energy accounts for only 0.05% of energy consumption. CUs clinical teaching partnership with Misión ILAC in the Dominican Republic (CU-ILAC) has implemented solar power usage, as supported by the university. Although, it is unclear what percentage of energy needs are being met through solar power. At CU in Phoenix (CU-PHX), there is no renewable energy source in place, nor has an official plan to establish a source been shared.</i></p> <p><i>CU does not utilize any off-site renewable energy across the institution.</i></p> <p>Recommendations: We encourage CU to significantly expand its renewable energy utilization amount and diversity. On-site renewable energy would be especially appropriate at CU-PHX given the climate's efficiency in solar power generation, the city's strong solar power infrastructure, and solar incentives in the state of Arizona. Off-site renewable energy would be appropriate across the institution, particularly through involvement in community wind farms, solar programs, biomass facilities, hydropower, or geothermal plants.</p>	

5.4. Are sustainable building practices utilised for new and old buildings on the <u>institution's</u>

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 not considered in the construction of new buildings. (0 points)	
Score Assigned:	3
<p><i>Score explanation: CU Sustainable Design Policy follows sustainable building practices for new buildings and renovations to old buildings. The sustainability guidelines are based on the silver rating criteria of Leadership in Energy and Environmental Design (LEED). While the policy does promote goals of retrofitting old buildings to optimize efficiency and sustainability, it is unclear to what extent retrofitting has been implemented. Given the CU Sustainable Design Process's statement that efforts include "evaluating existing buildings for optimum systems efficiency and upgrading with more efficient systems", we believe that the majority of buildings have been retrofitted.</i></p> <p>Recommendations: We encourage CU to continue sustainable design across all locations and commend the integration of educational programs into the improvement of campus sustainability. However, we suggest omitting the "stretch goal" described in the policy (Pg 3), and instead, making it the standard for building design going forward. Further, CU should routinely release the state of sustainable design across its locations that includes the extent of retrofitting in old buildings, such as in the Harper Center Report.</p>	

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?	
Yes, the institution has implemented strategies to encourage and provide environmentally-friendly transportation options 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 some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised. (1 point)	
The institution has not implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	1
<p><i>Score explanation: Creighton University (CU) has implemented strategies regarding environmentally friendly transportation options, but only at CU-OMA. These are in the form of on-campus EV-charging stations, secure bike racks, the Community Bike Project, campus shuttles,</i></p>	

bus passes, carpool resources, and commuting guides ([1](#), [2](#)). No such options have been expanded to CU-PHX, nor are sustainable travel plans outlined for CU-ILAC.

CU has piloted a voluntary [Air Travel Mitigation Program \(ATMP\)](#) to limit non-essential air travel and raise funds for sustainable transportation, but minimal information has been released about the program and its effectiveness.

Recommendations: We encourage CU to implement, improve, and advertise environmentally-friendly transportation strategies, especially at CU-PHX. Due to Phoenix's vast public transportation, the lack of on-campus housing, and widespread clinical sites, offering metro passes and carpooling support would be an appropriate start. Secondly, given the close proximity of student-friendly apartment complexes to CU-PHX, we suggest the school networks with local property managements to negotiate housing partnerships for students. Thus, incentivizing students to live together within walking distance to campus, decreasing commutes and reliance on single-rider transportation.

At the end of the piloted ATMP, we hope CU expands upon the program and participation requirements to limit non-essential air travel.

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?

Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)

The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)

There is **no** compost or recycling program at the institution. (0 points)

Score Assigned:

1

Score explanation: CU-OMA is the only CU location with comprehensive [recycling programs](#). While there are conventional recycling bins at CU-PHX, they are often mis- and under-utilized. Further, there are no resources for organic recycling at CU-PHX, nor resources made available to students and staff regarding community recycling programs.

Recommendations: We encourage CU-PHX to implement recycling programs that meet the needs of the campus and are feasible within Arizona's limited recycling infrastructure. Most importantly, emphasis must be placed on ensuring students and staff are aware of recycling protocols, as demonstrated in CU-OMA guides ([1](#), [2](#)), to prevent the misuse of recycling services.

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

Yes, the institution has **adequate** sustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are insufficient or optional . The institution is not engaged in efforts to increase food and beverage sustainability. (1 point)	
There are no sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	2
<p><i>Score explanation: While CU deployed a Dining & Waste Action Team within the Climate Change Task Force, there is no specific mention of dining selections in the SCI. However, CU-OMA reports multiple guidelines and ongoing efforts to improve dining sustainability (1, 2, 3). There are specific efforts to limit meat, support fair-trade products, and limit waste and usage associated with dining. Recommendations: We encourage CU to clarify the Dining & Waste Action Team's role in the SCI. Further, sustainability guidelines should be expanded and specified for CU-PHX.</i></p>	

5.8. Does the <u>institution</u> 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:	2
<p><i>Score explanation: Per CU Global Engagement Office, the institution has policy guidelines for supply procurement, but they are optional. Particularly, environmentally appropriate and fair-trade procurement is preferred when both efficiency and price are equal or more advantageous to traditional alternatives. The policies state that CU will continue to make sustainable switches when available and will give preference to businesses that also implement sustainability policies. The Climate Change Task Force has a Strategic Sourcing member overseeing and monitoring for improvements to sustainable supply procurement.</i></p> <p>Recommendations: We encourage CU to make specific sustainability requirements for supply procurement, and to continue engaging in sustainable supply chain and fair trade business.</p>	

5.9. Are there sustainability requirements or guidelines for events hosted at the <u>institution</u>?	
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: CU has shared a [Green Events Guide](#) to help guide sustainable event planning, but it is not a requirement for events. The guide provides detailed suggestions, tips, and local resources for all aspects of events – from planning to clean-up. Such tips include electronic invitations and RSVPs, avoidance of single-use or unnecessary items, and recyclable items to take to a recycling center, rather than throw out post-event.

Recommendations: *We recommend that CU also implements specific requirements that support event sustainability as a part of the event planning and approval process to ensure and track sustainability efforts.*

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

Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)

There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)

There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)

Score Assigned:

2

Score explanation: CU has a multitude of programs and initiatives in place to improve the sustainability of lab spaces. However, it is important to note that many of these are established and in use at the Omaha campus, less so at the Phoenix campus. This is largely due to the lack of lab spaces at the Phoenix campus.

[Programs and initiatives](#) in place at CU include a digital chemical inventory to limit chemical overconsumption and waste, Shut the Sash program to limit energy consumption, sustainable vendor purchasing with [Fisher](#), and pipet and expanded polystyrene recycling.

Recommendations: *We encourage CU-PHX to implement sustainable lab practices where applicable and further explore practices that are appropriate for our campus.*

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?

The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)

The institution is **entirely divested** from fossil fuels. (3 points)

The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)

The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)

Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)

Score Assigned:

2

Score explanation: CU has [partially divested](#) from fossil fuels, starting in 2020, planning for full divestment by 2030. Additionally, CU stated they will [reinvest](#) funds into renewable energy.

***Recommendations:** We encourage CU to continue its plan to fully divest from fossil fuels as soon as possible, and reinvest in renewable energy.*

Section Total (16 out of 32)

50.00%

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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 Creighton University SOM - Phoenix Health Science Campus

The following table presents the individual section grades and overall institutional grade for the Creighton University SOM - Phoenix Health Science Campus on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(45/72) \times 100 = 62.50\%$	B-
Interdisciplinary Research (17.5%)	$(11/17) \times 100 = 64.71\%$	B-
Community Outreach and Advocacy (17.5%)	$(9/14) \times 100 = 64.29\%$	B-
Support for Student-led Planetary Health Initiatives (17.5%)	$(13/15) \times 100 = 86.67\%$	A
Campus Sustainability (17.5%)	$(16/32) \times 100 = 50.00\%$	C
Institutional Grade	$(62.50 \times 0.3 + 64.71 \times 0.175 + 64.29 \times 0.175 + 86.67 \times 0.175 + 50.00 \times 0.175) = 65.24\%$	B

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which Creighton University SOM - Phoenix Health Science Campus has participated in the Planetary Health Report Card initiative.

Planetary Health Report Card Trends for Creighton University School of Medicine Phoenix

