



Planetary Health Report Card:

Creighton University
School of Medicine



2021-2022 Contributing Team:

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Summary of Findings

Overall	C
<u>Curriculum</u>	C-
<ul style="list-style-type: none"> • Creighton School of Medicine (SOM) established a Planetary Health & Sustainability Horizontally Integrated Discipline in 2021. This track is intended to provide longitudinal education on Planetary Health (PH) and Sustainability, but apart from one intro lecture, few PH objectives have been introduced into preclinical blocks. • The SOM can continue to improve by ensuring that PH topics are integrated into all curricular tracks as well as clerkship years. These efforts will promote longitudinal learning and the development of physicians aware of the pathophysiology as well as social processes implicated in PH. 	
<u>Interdisciplinary Research</u>	C+
<ul style="list-style-type: none"> • Creighton SOM lacks research in the field of PH and healthcare sustainability. The SOM can expand into PH research through interdisciplinary collaboration with the environmental and public health researchers across the university, particularly through the Kingfisher Institute and MPH program. • The SOM can improve by identifying faculty research mentors for students interested in PH research and encouraging quality improvement projects related to healthcare sustainably. The funding available through the Office of Sustainability for QI projects is a notable improvement from last year. • Creighton SOM is supportive of the Global Health Conference Midwest, a key platform for PH education and research advancement. 	
<u>Community Outreach and Advocacy</u>	C-
<ul style="list-style-type: none"> • The University partners with local organizations to promote PH. However, the SOM is not engaged directly in these relationships. The SOM is in the process of developing a process for engagement with the community when determining advocacy, research, and community partnership priorities. • Creighton can advocate for its hospital affiliates to offer patients accessible materials on the health impacts of climate change, such as education on the symptoms of heat stroke during severe heat waves. 	
<u>Support for Student-Led Initiatives</u>	B
<ul style="list-style-type: none"> • The SOM created a Planetary Health and Sustainability Task Force (TF) in response to the 2020 PHRC. The TF houses a branch for student-initiated PH projects. Overall, the SOM has avenues for support and funds. Lack of awareness of programs and few PH-focused faculty mentors are limiting factors to sustainability initiatives. • Institutional attention on PH and the publication of efforts on online platforms would improve engagement. 	
<u>Campus Sustainability</u>	D
<ul style="list-style-type: none"> • Creighton’s Office of Sustainability is leading slow but deliberate movement toward Creighton’s sustainability goals – notably, plans for full divestment by 2030 and a path for carbon neutrality. • Urgently, there is a need for more rigorous sustainable building practices, <i>particularly in the building of the new medical school.</i> • The SOM lacks basic sustainability practices seen in other parts of the university, such as composting. The SOM can improve by reconciling these differences and developing its own rigorous sustainability standards. 	

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 analyzing 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, urbanization, 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 medical 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 medical training. It is imperative that we hold our institutions accountable for educating medical 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 color, 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 medical schools, we have created a Planetary Health Report Card that medical students internationally can use to grade and compare their home institutions on an annual basis. This medical-student-driven initiative aims to compare medical 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 centered on environmental health impacts 5) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the *Planetary Health Alliance* as “a solutions-oriented, transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth”. 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 medical school 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.
- **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 vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (for example, undergraduate departments (USA), other related departments eg Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly. 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

providers 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 mold 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.

- **Elective:** The word “elective” refers to an optional course or lecture series that a medical 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.
- **Clerkship:** 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 or placements.

Literature Review:

Added to our resources this year, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a 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. 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?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	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.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Creighton University SOM offers a Student Interest Selective on “Restorative Recreation” to both M1 and M2s. This elective goes over Laudato Si and how it relates to care for our common home and also explores the benefits of nature in relation to human health. During this elective, students are asked to engage with the effects, including the health effects, of the degradation of our common home. While this selective does a great job at deepening students’ understanding of the need of nature in the human experience, we do not think that it succeeds in delving deep into topics directly related to planetary health such as climate change, natural disasters, changing infectious diseases, food systems, etc.</i></p>	

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.

0	This topic was not covered.
<p><i>Score explanation: In a lecture given by Dr. Townley called “Planetary Health: Existential Threats and Clinical Opportunities” multiple slides show the links between heat, climate change, and the effects that this has on human health, including emphasizing the interplay of heat on infectious disease, respiratory disease, heat stroke, mental health, and chronic diseases.</i></p> <p><i>The class of 2024 was given a new CBL on heat stroke, and it covered the relationship between extreme heat and health risks, however it was not linked directly to climate change.</i></p>	

3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The class of 2024 was given a CBL on heat stroke where the effects of heat were explored. Additionally, the physiological effects that increased heat has on the body were addressed.</i></p> <p><i>Other schools have entire lectures focused on the health effects of hurricanes, earthquakes, fires etc. For Creighton students in Omaha, it would be beneficial to focus on health presentations following heat, cold weather, and flooding exposures. It is imperative to integrate this metric into multiple lectures and CBLs to increase longitudinal learning. Additionally, we recommend addressing the impacts of extreme weather events on the healthcare system as a whole by emphasizing, for example, the cost of treating increased incidence of heat stroke as well as the cost of damages from storms and flooding.</i></p>	

4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: This was briefly covered in a lecture given by Dr. Horne where he addressed the increasing incidence of Chagas disease further North due to climate change. This was also generally</i></p>	

discussed in relation to vector-borne diseases in a lecture titled “Infectious Disease with Multisystem Consequences.” Additionally, in a recent lecture given to the Class of 2024, Dr. Bourret linked “global warming, animal control, transportation, ecological changes from war, and natural disaster or population changes” to changing patterns in infectious disease.

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: This topic was briefly introduced in Dr. Theresa Townley’s Gold Track lecture on “Planetary Health: Existential Threats and Clinical Opportunities.” She addresses how pollution underlies mortality of many chronic diseases. However, this was not covered sufficiently in the cardiology and pulmonary Blue Track courses as we do not feel prepared to explain the pathophysiology behind how pollution and other effects of climate change affect the cardiorespiratory diseases that are extremely common in our patients.

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: The Class of 2024 was given a CBL on heat and how increased heat affects the body. However this was not related to climate change as the reason for increasing heat. We encourage this topic to be explored sufficiently in the Blue Track lectures for Cardiology.

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

3	This topic was explored in depth by the core curriculum.
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2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: This is covered extensively in the selective “Restorative Recreation.” This elective emphasizes the impacts of an “increasing disconnectedness to nature on human health” and focuses on how reestablishing a physical connection with earth through nature immersion can ameliorate these effects. This was also briefly addressed in Dr. Townley’s Gold Track lecture on Planetary Health, but was not sufficiently covered in Brain and Behavior or Neuroscience Blue Track sessions.</i></p>	

8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: This was covered briefly in a Case Based Learning module given the first week of school to the Class of 2025 where students were asked to evaluate the physical environment and access to clean water and food as it relates to the social determinants of health.</i></p>	

9. Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The increased vulnerability of marginalized populations was mentioned in Dr. Townley’s Gold Track Lecture “Planetary Health: Existential Threats and Clinical Opportunities” where she showed the graphs highlighting the increased heat exposure in communities of color.</i></p>	

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: Creighton SOM does not cover this in the curriculum.

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

11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: While many lectures have included lists of teratogens, none of these lectures have explicitly related pollution or pesticides to impacts on the fetus or mother. Dr. Townley’s lecture “Planetary Health: Existential Threats and Clinical Opportunities” provided one example of black carbon particles reaching the fetal side of the placenta, but neither the pathophysiology nor the effects were described.

12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university’s surrounding community?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: This topic was covered in a Gold Track Lecture “Academic Service Learning” given by Dr. Townley. She emphasized that Omaha’s high caseload of children presenting with lead poisoning was and continues to be due to The American Smelting and Refining Company, Inc

historically releasing toxic air emissions from their downtown facility. This disproportionately affected those living closer to this plant - mainly communities of color and immigrants.

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

3	Indigenous knowledge and value systems are integrated throughout the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.
0	This topic was not covered.

Score explanation: Typically, Creighton has CURA trips that send two groups of students to Pine Ridge Reservation and Rosebud Reservation respectively, but due to COVID, these trips have been postponed. On these trips, students are instructed to explore challenges in delivering patient care, structural issues driving health in the region, and historical challenges to delivering care within the community as directed by the syllabus. Additionally, students spend time with locals and hear many stories about how Indigenous people wish to live off the land and the deep heritage behind this. Unfortunately, there is not a specific objective in this syllabus that includes climate and environmental health and the importance of highlighting this point may be overlooked because these trips are student-led. While we are grateful for the relationship that Creighton holds with these communities, we feel that this could be explored in more depth and in a more concrete manner.

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: Dr. Townley's Gold Track Lecture "Academic Service Learning" covered the effects of lead and other toxic chemicals historically released by The American Smelting and Refining Company, Inc and how this remains a justice issue that disproportionately affects children, immigrants, communities of color, and those with low SES based on proximity to where the factories operated. Dr. Townley's Gold Track Lecture "Planetary Health: Existential Threats and Clinical Opportunities" addressed the disproportionate effects of pollution on lower-income countries.

In summary, this question was addressed in two Gold Track Lectures and could be incorporated in greater depth across the various curricular tracks.

Curriculum: Sustainability

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: Dr. Townley’s Gold Track lecture, “Planetary Health: Existential Threats and Clinical Opportunities.” mentioned the negative environmental and health effects of meat production and consumption while also giving alternative food ideas to partake in, such as eating crickets. However, as this is such a vital component to patient wellness and physician advocacy, we feel that Creighton can do a much better job of empowering students to feel prepared to have these conversations with patients.

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

3	This topic was explored in depth by the core curriculum
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: Dr. Townley’s Gold Track lecture discussed waste generated by hospitals and the idea of the circular economy. It emphasized the goals of preservation of natural capital and optimization of resources through reuse and recycling. It also touched on ensuring effective design of the health system in order to limit pollution, greenhouse gas emissions, and toxic materials. Additionally, Dr. Swanson provides a lecture entitled “Sustainability in Laboratory Practice” to the SOM graduate IDC601 cohort, but this is focused on ways to reduce energy consumption and materials in a research lab without emphasis on how to do this in a hospital or clinic setting.

17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (1 point each)

1	Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	The impact of anesthetic gasses on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anesthesia or choosing less environmentally anesthetic gas options with reduced greenhouse gas emissions
1	The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on de-prescribing where possible and its environmental and health co-benefits would fulfill this metric.
1	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 for obesity. This is commonly known as social prescribing in the UK.
1	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
<p><i>Score explanation: Creighton curriculum does not cover these aspects. While Dr. Townley's lecture emphasized the amount of waste that the healthcare system creates, few resources or strategies are given to mitigate this waste production.</i></p> <p><i>Creighton SOM curriculum does not address the pharmaceutical effect on climate change nor give avenues to mitigate this.</i></p> <p><i>While social prescribing is vital to our knowledge base as physicians, Creighton does not emphasize this in lecture, and it is not evident in students' experiences on clinic rotations.</i></p>	

Curriculum: Clinical Applications

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?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change

Score explanation: While one slide in Dr. Townley's lecture "Planetary Health: Existential Threats and Clinical Opportunities" noted the importance of asking patients about exposure to smoke and air pollution, we do not think this equips us with the tools to have these conversations with patients in a practical manner.

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

2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.

Score explanation: During Pulmonology, we are given tools to take a thorough occupational and household exposure social history and how this relates to increased risk for certain diseases – for example, how asbestos and silicone can impair alveolar macrophage function. We are also taught to take a detailed social history during our Clinical Skills Experiences with Dr. Peters including occupational history and smoking history. We recommend expanding these lessons to include exposures to air pollution and vector-borne diseases.

Curriculum: Administrative Support for Planetary Health

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

4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.

Score explanation: In the Spring of 2021, the SOM established a Planetary Health and Sustainability Task Force composed of faculty, physicians, and students from both the Omaha and Phoenix campuses. This task force focuses on incorporating sustainability goals into the strategic plan, initiating change, and tracking improvements. This task force meets a few times a semester and is subdivided into committees focused on Curriculum, Laboratory Research, Hospital Operations, and Education & Outreach. The Curriculum committee is actively improving Planetary Health education and established a Planetary Health & Sustainability Horizontally Integrated Discipline for mapping PH objectives into the curriculum.

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

6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s).
0	There is minimal/no education for sustainable healthcare.

Score explanation: Score explanation: Dr. Townley's Planetary Health Lecture is the primary source of education on this topic. This lecture is part of a longitudinal core service-learning course for first and second year students. Over the last year, the Planetary Health and Sustainability Task force implemented a new Planetary Health & Sustainability Horizontally Integrated Discipline for the longitudinal curriculum. As of now it includes one lecture for M1s, but the delivery of the inaugural lecture in 2021 was suboptimal due to a logistic challenge. There is significant continued work to improve the lecture and map planetary health content into pre-clerkship blocks. Elective courses, specifically the Student Interest Selectives, for first and second year students provide select students with additional education on planetary health and/or sustainability. In summary, the information is weakly integrated because the discontinuation of Dr. Townley's Planetary Health Lecture would eliminate the majority of coverage of planetary health objectives. We recommend integrating planetary health topics throughout the organ system (Blue track) curriculum (M1-M2 year) and activities related to health care sustainability and taking an environmental history (M3-M4 year).

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?

1	Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
0	No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.

Score explanation: The SOM's Planetary Health and Sustainability Task Force, chaired by Dr. Patrick Swanson, is responsible for curricular integration of planetary health and sustainable healthcare.

Section Total (x out of 69)	30
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Back to Summary Page [here](#)

Interdisciplinary Research

Section Overview: *This section evaluates the quality and quantity of interdisciplinary planetary health research at the medical school and 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, medical schools 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 emphasized.*

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation: Creighton's Master's of Public Health program moved to the School of Medicine in January of 2022. There is at least one faculty member for the MPH program who researches environmental health, specifically climate and natural disasters and their ecological impact on human health. Additional sustainability and health research takes place across the university. However, there are no research efforts dedicated specifically to Planetary Health or healthcare sustainability among MD faculty. We recommend that the SOM identifies faculty who are willing to conduct and/or mentor MD students in Planetary Health research.</i></p>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	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.
1	There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.

Score explanation: The Kingfisher Institute supports interdisciplinary research across the institution, and in the spring of 2021, it launched an initiative dedicated to [Sustainable Development](#). The goal of this initiative is to educate campus about the United Nations Sustainable Development Goals. Since this initiative is newly formed, there are no outcomes to report since its creation, and it appears to be focused on education rather than research, we have given ourselves a score of “0.” It appears the program is still in the development stage and could be an avenue for planetary health research in the future.

Additionally, the [Master’s of Public Health](#) program moved to the School of Medicine in 2022. Completion of this degree requires a class in Environmental Health and can include electives that address climate change. The school has a full-time environmental science faculty member for the MPH program. We recommend developing interdisciplinary research and education with MD and MPH faculty and programs.

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 medical school?

3	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.
2	Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda.
1	No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda.
0	There is no process, and no efforts to create such a process.

Score explanation: Current efforts in the School of Medicine to develop a new strategic plan include discussions about promoting health equity in the community through engagement, advocacy, research, and environmental sustainability.

4. Does your institution have a planetary health website that centralizes ongoing and past research related to health and the environment?

3	There is an easy-to-use, adequately comprehensive website that centralizes 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.
2	There is a website that attempts to centralize various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.

0	There is no website.
<p><i>Score explanation: Creighton University has a sustainability webpage that centralizes campus sustainability efforts, including the Sustainable Creighton Initiative, grant opportunities for students, and undergraduate academic programs. The campus-wide website does not list research efforts across the university. Additionally, the website does not specifically emphasize health as it relates to the environment, but it addresses topics relevant to health. We recommend listing research efforts under the “Academic” tab and adding “Health” as a guiding principle for the Office of Sustainability.</i></p>	

5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.
<p><i>Score explanation: Creighton has not hosted any conferences or symposiums strictly dedicated to planetary health. However, Creighton’s annual Global Health Conference Midwest includes speakers focused on planetary health. In 2022, the conference included a breakout session entitled “Climate Change and Disaster Health Preparedness,” a panel on biocontainment, and a keynote on advocating for healthcare for “forgotten people” including populations affected by disasters. The conference is hosted in partnership by multiple schools within the University, including the School of Medicine.</i></p>	

6. Is your medical school a member of a national or international planetary health or ESH organization?	
1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is not a member of such an organization
<p><i>Score explanation: In the fall of 2021, Creighton School of Medicine joined the Global Consortium on Climate and Health Education. We recommend Creighton SOM meaningfully engage in the work of this and other climate-health organizations.</i></p>	

Section Total (x out of 17)	10
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Back to summary page [here](#)

Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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 color. 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.*

1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.

Score explanation: Creighton lists its sustainability-focused community collaborations and partnering community groups on the Office of Sustainability [webpage](#).

Creighton offers an environmental justice-focused [community orientation](#) entitled “Climate Change: Faith, Hope, and Action.” This program is a partnership among the Office of Sustainability, the Center for Service and Justice, and community organizations. The goal is to introduce participants to the issue of environmental justice through site visits, education, and community-based and faith-based discussion. Particularly, the connections between planetary health, environmental health, and social justice are demonstrated through the example of the North Omaha coal-fired power plant. We recommend the School of Medicine partner with the orientation planners to increase medical student participation or develop a program specifically for medical students.

There are additional partnerships maintained by the Schlegel Center for Service and Justice and other offices across the university that promote planetary and environmental health.

Although students in the SOM are engaged with environmental organizations, the SOM does not play a significant role in advancing these community relationships. Therefore, we would not consider the following “meaningful partnerships” although they are important community connections: SOM students volunteer with Habitat for Humanity, an organization focused on reusing resources in the community. SOM students also volunteer at Completely Kids Community Garden to help plant, weed, and tend to this garden, which promotes environmental stewardship among students and community members.

2. Does your medical school offer community-facing courses or events regarding planetary health?

3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The medical school has not offered such community-facing courses or events.

Score explanation: The School of Medicine is largely involved in the planning of the [Global Health Conference Midwest](#); this conference is open to the community at the cost of \$10-30 and includes lectures on Planetary Health. Annually, the University hosts a Planetary Emergency Lecture as part of a public lecture series sponsored by the Creighton Global Initiative. The most recent lecture was March 17, 2021 and was titled “Climate Change Economics: Realizing a Just Transition to a Clean Energy Economy.” These lectures are open to the Omaha community and recordings are available on Creighton’s [website](#).

3. Does your medical school have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?

2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not regularly receive communications about planetary health or sustainable healthcare.

Score explanation: University-wide presidential email updates occasionally focus on environmental sustainability or divestment, however, none in the last year have included mention of planetary health, sustainability, or sustainable healthcare. Students do not receive newsletters or communication from the SOM regarding this topic. The Office of Sustainability produces a weekly email update that students, faculty, and staff can [sign up to receive](#), but medical students are generally not aware of this. These updates periodically include events or resources related to planetary health and/or sustainable healthcare. We recommend the Office of Sustainability send students an email invitation to the listserv each August. We recommend that the Office of the Dean or Planetary Health and Sustainability Task Force send out a biannual update on Creighton’s efforts to address Planetary Health and Healthcare Sustainability.

4. Does the institution or main affiliated hospital trust 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?

2	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.
1	Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are no such accessible courses for post-graduate providers

Score explanation: Participants can receive CME credit from the Global Health Conference which is co-hosted by the School of Medicine and includes lectures on planetary health.

5. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about environmental health exposures?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centers have accessible educational materials for patients.

Score explanation: Children's Hospital of Omaha provides materials on environmental exposures. We recommend posting patient-facing materials on environmental exposures on the websites for CHI and clinic affiliates.

6. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about climate change and health impacts?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.

Score explanation: We could not find easily accessible materials online and none of the physicians we contacted were aware of printed materials. We recommend posting patient-facing materials on climate change and the health impacts on the websites for CHI and clinic affiliates.

Examples of resources hospitals and clinical affiliates could provide in clinic or on their websites: See [this brochure](#) created by the Medical Society Consortium on Climate and Health, [these brochures](#) created by Health Care without Harm, or this resource from the [EPA](#).

Section Total (x out of 14)	6
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Back to summary page [here](#)

Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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.

1. Does your institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	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.
1	The medical school encourages sustainability QI projects (to fulfill 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.
0	No, the institution does not offer opportunities or support for sustainability initiatives or QI projects.
<p><i>Score explanation: The University offers a grant that is available to medical students. The grant was created in the fall of 2021 and is housed in the Office of Sustainability. The webpage states, “The mission of the Creighton Student Sustainability Action Fund (CSSAF) is to contribute to building a culture of sustainability at Creighton University by enabling, supporting, and financing student-driven initiatives that collaboratively tackle interconnected environmental, social, and economic issues.”</i></p> <p><i>Separately, the School of Medicine operates an M1 Summer Research Program which provides funding for non-specific student projects, including QI initiatives. Students may submit proposals for projects of their own imagination and solicit mentors independently.</i></p> <p><i>We encourage greater mentorship and support for medical students who would like to enact sustainability initiatives or QI projects with university funds.</i></p>	

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	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.

0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<p><i>Score explanation: The School of Medicine operates an MI Summer Research Program that provides funding for student projects. Students may submit proposals for projects of their own imagination and solicit mentors independently. There are no planetary health-focused mentors listed in the database for student research mentors. Current students doing research in this field work with mentors outside of Creighton University.</i></p> <p><i>We encourage the summer research program directors to recommend planetary health and/or sustainable healthcare topics as an area of research to which the existing funds could be applied. We also recommend the medical school expand its relationships with faculty across the university—particularly within the Public Health program—who are involved in research related to climate change, planetary health, or sustainable healthcare.</i></p>	

3. Does the medical school have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
2	The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<p><i>Score explanation: There is no dedicated page in the School of Medicine section of Creighton website.</i></p> <p><i>We encourage creation of a site under the SOM “Students” section that focuses on student activities and programs that promote sustainability and planetary health. We likewise call for a page under “Research” on the SOM website that lists research initiatives specifically related to climate change and health as well as identifies faculty involved or interested in mentoring students on these topics. Finally, we recommend including the Global Health Conference Midwest as a regional meeting opportunity under the Research section of the website.</i></p>	

4. Does your medical school have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
2	Yes, there is a student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.

1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support.
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Score explanation: In the fall of 2021, students on the SOM's Planetary Health and Sustainability Task Force created a student branch. The student branch of the task force is advised by Dr. Patrick Swanson. The group is responsible for providing student input on the goals of the task force. Additionally, this group is responsible for updating the Planetary Health Report Card. Students within this group are also encouraged to pursue projects related to planetary health and healthcare sustainability and garner support from the group as needed. Although the "student branch" is a recognized entity, it is not technically a registered student group and does not receive funding. We see room for improvement through a funded student organization and more robust faculty support.</i></p> <p><i>There are clubs, including Justice in Medicine and the Mayan Community Health Collaborative, that include programming related to climate justice and climate/environment as related to health outcomes. Such themes are not explicit in the mission of these groups. The groups also vary in their funding status.</i></p>	

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.
<p><i>Score explanation: A medical student represents the School of Medicine on the university-wide Climate Change Task Force. (The CCTF is a temporary group assembled to prepare a report for the university's carbon neutrality planning effort.) Additionally, three medical students serve on the newly-formed medical school Planetary Health and Sustainability Task Force which focuses on curriculum reform, laboratory research, hospital operations, and community education & outreach.</i></p> <p><i>We recommend medical student and medical faculty representation on any university body making decisions about sustainability and our institutional response to climate change.</i></p>	

6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	
1	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 organize hiking, backpacking, kayaking, or other outings for students)

Score explanation:

- *The Student Government Wellness Chair regularly organized hikes in the fall of 2021.*
- *The Wilderness medicine interest group hosts outdoors events.*
- *The Medical Innovation, Collaboration, and Entrepreneurship club hosted a speaker to discuss the environmental impacts of volatile anesthetics and the healthcare system at large in winter 2021.*
- *The Mayan Community Health Collaborative had a presentation where we learned about traditional Mayan sustainable farming, specifically Mayan “milpa” forest farming.*
- *In the spring of 2021, the School of Medicine partnered with the University Campus Clinic to help maintain the University Campus Community Garden.*
- *The [Community Fair](#) at the Global Health Conference Midwest presented an opportunity for students to hear directly from local actors, including the Green Omaha Coalition.*
- *Completely KIDs and City Sprouts maintain calls for regular volunteers to participate in community garden and food insecurity initiatives.*
- *In the fall of 2021, the Theatre for Social Justice class [hosted performances](#) related to climate change. “The public event included plays from several international playwrights commissioned by the Artic Circle for this year’s event, plus original short plays by [students]. The event culminated in an audience discussion with Edgar Romero Gonzalez and Makenna Medrano from City Sprouts and Nick McCreary from Creighton Office of Sustainability Programs.”*
- *Many opportunities for community involvement and volunteering were suspended due to the COVID-19 pandemic. There are a number of active, dedicated community groups in Omaha that focus on urban agriculture (Big Muddy), sustainable farming (Sacred Seed), community gardens (The Big Garden), environmental justice and the other areas listed; we would encourage renewal and/or establishment of relationships with these groups as public health safety and local regulations permit.*

Section Total (x out of 15)	11
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Back to summary page [here](#)

Campus Sustainability

Section Overview: *This section evaluates the support and engagement in sustainability initiatives by the medical school and/or 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 endeavor, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinizing 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 minimizing environmental impact.*

1. Does your medical school and/or institution have an Office of Sustainability?	
3	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 and/or medical school.
2	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 medical school and/or hospital sustainability.
1	There are no salaried sustainability staff, but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation: Creighton University has an Office of Sustainability that serves the entire university, including our Phoenix campus. The office supports two full-time staff members. There is not a specific branch for graduate medical or hospital programs.</i></p>	

2. How ambitious is your medical school/institution’s plan to reduce its own carbon footprint?	
4	The institution has a stated goal of carbon neutrality by 2030 or earlier and the medical school / institution has a well-defined and adequate plan in place to achieve this goal.
3	Yes, there is a stated carbon neutrality goal by at least 2040 and the medical school/institution has a well-defined and adequate plan in place to achieve this goal.
2	Yes, there is a stated carbon neutrality goal by at least 2040, but the medical school/institution has not created a plan to reach that goal or the plan is inadequate.
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.
0	There is no stated goal for reduction of CO2 emissions.
<p><i>Score explanation: Creighton does have a formal plan to be carbon neutral by 2050, with a 40% carbon reduction below baseline emissions by 2028. This is outlined in a plan created 2013 found here.</i></p>	

but no one in the medical school is tasked with ensuring we are meeting the goals found in the 2013 plan. The University plan is currently in the process of being updated and a new plan will be released April 26th 2022 that may improve this score for next year.

Given the ambitious plan by 2028 and that the plan is comprehensive we have, following discussion with the PHRC leadership team, awarded 2 points, which is a compromise between not having a carbon neutrality score by 2040 but having a well-defined plan for 2050 with an ambitious target by 2028.

3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy?

3	Yes medical school buildings are 100% powered by renewable energy
2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.

Score explanation: The medical school facilities have no direct renewable energy, but due to the renewable energy efforts of the Omaha Public Power District that supplies the school's energy, some off-site renewable energy is a part of Creighton's electricity portfolio (close to 40%). However, this would likely be about 0.2% of total energy usage within medical school buildings. There are plans in the works to install solar panels on a new medical school building as well as relocate old panels, although plans will not be announced until April 26th, 2022 and are not currently in effect.

4. Are sustainable building practices utilized for new and old buildings on the medical school campus, with design and construction of new buildings and remodeling of old buildings conforming to a published sustainability rating system or building code/guideline?

3	Yes, sustainable building practices are utilized for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.
2	Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have not been retrofitted.
1	Sustainable building practices are inadequately or incompletely implemented for new buildings.
0	Sustainability is not considered in the construction of new buildings.

Score explanation: Creighton has outlined goals for building sustainably in the following documents: [process](#), [policy](#), and [construction](#). The goals are vague and do not have required standards to meet and buildings have not been sufficiently retrofitted. This will be reevaluated in 2028.

5. Has the medical school implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

2	Yes, the medical school 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-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.

Score explanation: The medical school specifically has not implemented any strategies to encourage or provide environmentally-friendly transportation options and driving seems to be the primary form of transportation for the majority of students. We recommend expanding any transportation initiatives from the undergraduate campus to the medical school. We suggest the medical school explore and support the installation of a Heartland B Cycle bicycle rack in closer proximity to the Cardiac Center.

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?

2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.

Score explanation: The undergraduate campus has a compost program and a conventional recycling program with the exception of glass recycling. The medical school buildings do not have a compost program, but do have limited recycling. We would recommend the recycling bins to be increased in frequency—and paired with trash bins—in the medical school and the compost program to expand to the Omaha medical school building. We also recommend improved recycling and compost efforts on the Phoenix campus.

7. Does the medical school apply sustainability criteria when making decisions about the campus

food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
3	Yes, the medical school 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.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.
<i>Score explanation: There is no evidence that there are sustainability guidelines for food and beverages.</i>	

8. Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?	
3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.
<i>Score explanation: Creighton does have sustainability procurement guidelines, however, sustainable options are chosen when “quality, function and cost are equal or superior” or when deemed practical.</i>	

9. Are there sustainability requirements or guidelines for events hosted at the medical school?	
2	Every event hosted at the medical school must abide by sustainability criteria.
1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required.
0	There are no sustainability guidelines for medical school events.
<i>Score explanation: There are currently no guidelines for medical school events. We recommend that the student government implement requirements, specifically for composting.</i>	

10. Does your medical school have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.
<i>Score explanation: There are no programs or Creighton-specific guidelines regarding environmental sustainability within lab spaces. Since last year, a task force within the School of Medicine has begun meeting to improve lab sustainability, so future guidelines are under discussion.</i>	

11. Does your institution’s endowment portfolio investments include fossil-fuel companies?	
4	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.
3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest, but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<i>Score explanation: In a message to campus December 31, 2020, President Hendrickson announced that Creighton has committed to “exit from its holdings in private fossil fuel investments within the next 10 years.”</i>	

Section Total (x out of 31)	9
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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%

**Within each grade bracket, a score in the top 5% (5 to 9%), receives a "+", and a score in the bottom 5% (0-4%) receives a "--". For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for the Creighton School of Medicine

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

Section	Raw Score	Letter Grade
Planetary Health Curriculum (30%)	$(30 / 69) \times 100 = 43\%$	C-
Interdisciplinary Research (17.5%)	$(10 / 17) \times 100 = 59\%$	C+
Community Outreach and Advocacy (17.5%)	$(6 / 14) \times 100 = 43\%$	C-
Support for Student-led Planetary Health Initiatives (17.5%)	$(11 / 15) \times 100 = 73\%$	B
Campus Sustainability (17.5%)	$(9 / 31) \times 100 = 29\%$	D
Institutional Grade	49%	C

Report Card Trends

Section Overview

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

