



Planetary Health Report Card (Medicine): *Mayo Clinic Alix School of Medicine*



2024-2025 Contributing Team:

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Land acknowledgment: Mayo Clinic Alix School of Medicine - Minnesota acknowledges that the land on which we gather in is the territory of the Wahpeton tribe who were a part of the alliance called Oceti Šakowin — The Seven Council Fires. Within the Seven Council Fires, the Wahpeton people were a part of the Santee or Eastern Dakota tribe (mnhs.org).

Anishinaabe and other Indigenous people also live in this area (nativegov.org).

These homelands are sacred to Indigenous Peoples throughout the region. We acknowledge their past, present, and future generations who forever call this place home. (Citation:

<https://native-land.ca/>, <https://rochesterlocal.com/land-acknowledgement/>)

Summary of Findings

Overall Grade	C+
Curriculum	D
- The effects of climate change on health are briefly mentioned throughout the curriculum, which is where many of the points for this section were gained. However, in depth coverage of these issues is not provided, and the inclusion of climate change material would be much more effective if distributed throughout. Recommendations: We recommend reviewing and bringing back key lectures that were once part of the core curriculum and adding additional depth relevant to foundation and organ blocks, combined with discussion with local environmental organization and government representatives to better learn how the health of communities in Minnesota are affected by climate change more.	
Interdisciplinary Research	B-
- Mayo Clinic has engaged in some research activities pertaining to planetary health and hosted conferences that included discussion of the subject in 2020. However, there is not a clearly sustained focus on planetary health research or an organized database for collaborative opportunities. Recommendations: Mayo Clinic Alix School of Medicine could organize a conference directly related to Planetary Health could also join the Planetary Health Alliance. They could have a more direct page within the Green Initiatives website, highlighting research related to environmental and human health connections.	
Community Outreach and Advocacy	A
- Mayo Clinic Alix School of Medicine has little community planetary health outreach. However, as an institution, Mayo Clinic has organized a handful of community-facing events about environmentalism and there are some patient education handouts that are marginally related to this topic. The Sustainability Grand Rounds is one key effort. Students have also individually supported community outreach in related areas. Recommendations: Mayo Clinic could support more community partnerships and opportunities related to planetary health, specifically at the medical school level. MCASOM could organize events that allow students to learn about the Well-Living Lab and engage in discussion on planetary health topics.	
Support for Student-Led Initiatives	B
- The Mayo Clinic Alix School of Medicine itself provides little support for student-led sustainability related initiatives. There are institutional programs such as the Green Advocate program for employees of the Mayo Clinic to become involved in sustainability efforts around the clinic, this is poorly publicized though. Recommendations: MCASOM could distribute an email at the beginning of the academic year informing new and current students about the Green Advocate program. Additionally, the school could include links to Mayo's sustainability efforts and research opportunities directly on the medical school webpage.	
Campus Sustainability	D+
- The Mayo Clinic institution has adopted several initiatives for improved campus sustainability, primarily focused around reducing energy consumption and unnecessary waste. However, there is limited investment in renewable energy and no current plans for carbon neutrality, even with future development plans. No staff represent the medical school specifically in the area of sustainability. Recommendations: Mayo Clinic Alix School of Medicine could appoint a sustainability representative within the medical school and establish medical school specific sustainability guidelines for events and procurement. We recommend that Mayo Clinic adopt more aggressive climate goals, including goals for carbon neutrality and encourage movement toward oil and gas divestiture.	

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:	2
<i>Score explanation: A longitudinal 20-hour Sustainability in Medicine Selective was started and is offered virtually to medical students at the Mayo Clinic Alix School of Medicine Arizona/Rochester campuses, encompassing various topics in medical sustainability like managing medical waste and operational efficiency. This elective involves a course with online modules and talks along with hour-long discussions throughout a week in November, with the remaining hours dedicated toward working with the Mayo Clinic Green Committee on a quality improvement project.</i> <i>Selected Sustainability Selective Lecture Topics:</i> 1. Environmental Impact of Anesthesia 2. OR Sustainability - Going green in the operating room 3. Wildfires, Heat, and Malaria: The Old and the New 4. Wildfires and Respiratory Health 5. The Cancer Cost of Climate Change 6. Forging Partnerships for Community Adaptation to Escalating Wildfire Smoke Events 7. Food as Medicine 8. Drug Repositories: Drug Recycling/Medication Re-Dispensing 9. Sustainability on Campuses / Other Medical Institutions 10. Energy efficient hospitals/solar panels for hospitals 11. Disaster preparedness and Climate Resilience 12. Contagious disease and climate change 13. Trees and Wellbeing / Mental Health 14. Sustainability in Radiology	

Other enrichments / selectives / interest groups do cover topics related to or in planetary health courses including the Global Health Online Learning, the Global Health Equity Scholars Distinction Track, Culinary Medicine, Lifestyle Medicine Interest Group, etc.

Recommendations: *Addition of additional related selectives pertaining to planetary health may be of interest, with projects addressing some of the concerns described in this report card being one potential actionable item.*

Curriculum: Health Effects of Climate Change

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

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

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

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

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

Score Assigned:

1

Score explanation: We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum for the first year of medical school, which is of large concern to us as students. Some lectures in our elective coursework, including selectives like Sustainability in Medicine, etc. do cover these topics, but not as in-depth as the prior curriculum did. Previously, there were a few lectures and a case study session in 2023 in the mandatory I-DARE curriculum that discussed climate change as a public health crisis, including discussion on the record heatwaves in 2021 in the Pacific Northwest, wildfires, and the spread of disease as a result of climate change.

Recommendations: *Last year, there was a suggestion to have more inclusion of how Minnesota was locally impacted, and we think this would be of interest to bring back. We suggest inclusion of more explicit discussions regarding planetary health as a field and relevant topics. [Examples](#) of resources covering organ block topics pertaining to climate health can be found [here](#) on the [Climate Resources for Health Education website](#) which several Mayo Clinic students participate in the development of. Specific topics that could be integrated into the curriculum include:*

Microbiology - inclusion of how climate change increases interactions between humans and wild animals, increasing transmission of diseases as well as mosquito-borne diseases; discussion of how anthropogenic climate change disrupts ecosystems and parasitic transmission of diseases; inclusion of planetary health case studies that focus on infectious diseases of microbiological relevance

Cardiology, Pulmonology, Psychiatry - these organ blocks, in particular, could each discuss the topics described in the criteria / questions below

Disruptions in Development - how environmental change and wildfires can impact development of children and communities and the potential impact that environmental change might have on pediatric health as well

I-DARE - bring back prior curriculum discussion on how climate change particularly impacts marginalized communities historically and into the future; how countries that are the hardest hit by epidemics and pandemics are often those with the least resources to respond to climate change.

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

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

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

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

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

Score Assigned:

1

Score explanation: We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum for the first year of medical school, which is of large concern to us as students. Discussions in this course included how climate change caused supply chain disruption, infrastructure disruption, and massive insurance losses. Some lectures in our elective coursework including selectives like Sustainability in Medicine, etc. do cover these topics, but not as in-depth as the prior curriculum did (see 1.1).

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:

1

Score explanation: We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum for the first year of medical school, which is of large concern to us as students. Some lectures in our elective coursework, including selectives like Sustainability in Medicine, etc. do cover these topics, but not as in-depth as the prior curriculum did (see 1.1).

Recommendations: *In the foundational blocks, specifically microbiology, have discussion regarding how climate is affecting the epidemiology of the spread of infectious diseases.*

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.

This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework. (1 point)	
This topic was not covered.	
Score Assigned:	1
<i>Score explanation: We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum for the first-year of medical school, which is of large concern to us as students. Some lectures in our elective coursework, including selectives like Sustainability in Medicine, etc. do cover these topics, but not as in-depth as the prior curriculum did (see 1.1).</i> Recommendations: <i>As an example of potential curriculum that would involve active participation yet not require too much additional time would be inclusion of discussion about air quality in our area (Rochester, MN) and sparking discussion among medical students on what this could look like in the coming years, potential avenues for technology or detection to be implemented to track air quality better and comparison to other locations throughout Minnesota.</i>	

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework. (1 point)	
This topic was not covered.	
Score Assigned:	1
<i>Score explanation: We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum, which is of large concern to us as students. Some lectures in our elective coursework, including selectives like Sustainability in Medicine, etc. do cover these topics, but not as in-depth as the prior curriculum did (see 1.1).</i>	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework. (1 point)	

This topic was **not** covered.

Score Assigned:

1

Score explanation: We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum for the first year of medical school, which is of large concern to us as students. Some lectures in our elective coursework, including selectives like Sustainability in Medicine, etc. do cover these topics, but not as in-depth as the prior curriculum did (see 1.1). The longitudinal psychiatry and Disruptions in Development (DiD) curriculum, which addresses mental healthcare and neuropsychological aspects of medicine, both covered a variety of topics; however, the effects of environmental degradation and climate change on mental health was not one of them. Topics that were addressed involved the legalization of recreational drugs, discussions of obesity in medicine, thoughts and feelings around anatomic dissection and body donation, and disability justice.

Recommendations: *Integration of the relevance of climate anxiety and also environmental impacts on mental health broadly into the psychiatry and psychology block curriculum, as well as Disruptions in Development (DiD) would be ideal. A number of activists or speakers might be of interest to invite during DiD discussion sessions would be an intriguing avenue or opportunity.*

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.

This topic was **briefly** covered in the **core** curriculum.

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

This topic was **not** covered.

Score Assigned:

1

Score explanation: This is not covered in the core curriculum at the Mayo Clinic Alix School of Medicine in Minnesota. We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum, which is of large concern to us as students.

In the 20-hour Sustainability in Medicine selective in November, lectures addressed relationships between health, individual patient food and water security, ecosystem health, and climate change. Though this selective primarily focuses on healthcare system sustainability, there are sessions on “Disaster preparedness and climate resilience” and “Food as medicine” that explore this topic.

In addition, this topic is covered in a 20-hour Investigating Native Health Through Documentary selective, which explores topics in Native health through watching various documentary films. The topics covered include:

- *Stereotypes of Native American populations in film*
- *Social determinants of health & policy*
- *Food sovereignty*
- *Significance of water*
- *Substance use and mental health*
- *Traditional medicine*
- *The impact of pipelines*
- *The consequences of polluted water on indigenous communities*

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

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

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

This topic was **not** covered.

Score Assigned:

1

Score explanation: As part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum, we did have a significant amount of discussion surrounding social

determinants of health and how marginalized populations are impacted by the built environment, but these did not have an extensive focus on the outsized impact of climate change on human health and communities. This topic was briefly mentioned in some aspects of the Sustainability in Medicine selective as well (see 1.1 - Forging Partnerships for Community Adaptation to Escalating Wildfire Smoke Events specifically discussed wildfire smoke and displacement impacts on marginalized populations).

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

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

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

This topic was **not** covered.

Score Assigned:

1

Score explanation:

There was once a lecture on Climate & Health Policy Solutions to the Climate Crisis that discussed ongoing issues, inequities, and policy development related to climate change, with a focus on Minnesotans. One slide listed the following social factors that limit resilience when extreme weather events occur:

- *living in poverty*
- *living in an area of concentrated poverty and/or racially segregated housing*
- *having an underlying chronic health condition or disability*
- *language barrier*
- *housing instability*
- *being unemployed having lower levels of education*

However, the curriculum lacks discussion on regional or global inequities to climate change impacts. We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum, which is of large concern to us as students. Some lectures in our elective coursework, including selectives like Sustainability in Medicine, etc. do cover these topics, but not as in-depth as the prior curriculum did (see 1.1)

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

1.11. Does your medical school 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.

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

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

This topic was **not** covered.

Score Assigned:	1
<i>Score explanation: The 20-hour Rural Medicine Selective discusses common health issues affecting rural populations in the Midwest and Southeastern Minnesota who in particular have a close connection to the natural environment. This selective includes a session discussing occupational hazards of raising livestock and farming leading to exposures to pesticides, zoonotic diseases, injuries, and infections. However, this selective does not focus on climate change or how planetary health impacts individual health, and reproductive-specific health effects were only briefly mentioned. They speak a little to the shortage of OB/GYN services in rural communities and challenges that may be faced related to this as well.</i> <i>In the foundational blocks: including pathology, pharmacology, and microbiology, there is brief discussion on the symptoms to recognize for industry-related environmental toxins like pesticides, but not regarding air pollution and not necessarily expanding on its impact on reproductive health specifically (i.e. asbestos exposure and mesothelioma, aspergillosis, anticholinergic symptoms of pesticide exposure or toxicity, etc.)</i>	

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.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework. (1 point)	
This topic was not covered.	
Score Assigned:	1
<i>Score explanation: There was a lecture on Climate & Health Policy Solutions to the Climate Crisis that discussed ongoing issues, inequities, and policy development related to climate change, with a focus on Minnesotans. One slide stated that "Extreme heat, severe storms and flooding, wildfires, drought, vector-borne diseases, and air pollution are increasingly impacting the physical and mental health of Minnesotans." Another slide specifically discussed how "Intense rain events, drought, etc. affect farming economy and the health and mental health of Minnesota farmers" and how the "Location of toxic waste and industrial sites in communities of color places their health at risk from routine chemical emissions, as well as from extreme weather events."</i> <i>The 20-hour Rural Medicine Selective also discusses common health issues affecting rural populations in the Midwest and Southeastern Minnesota, who in particular have a close connection to the natural environment. This selective includes a session discussing occupational hazards of raising livestock and farming leading to exposures to pesticides, zoonotic diseases, injuries, and infections. However, this selective does not focus on climate change or how planetary health impacts individual health.</i> <i>Students also have the option to participate in discussions led by the community / city council initiatives or for policy in Minnesota at large such as through the American Medical Association (AMA), the Minnesota Medical Association (MMA), and the Minnesota Pollution Control Agency. These may include topics addressing environmental threats relevant to Mayo Clinic's surrounding community.</i>	

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.

This topic was **briefly** covered in the **core** curriculum.

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

This topic was **not** covered.

Score Assigned:

1

Score explanation: Although it has been discussed in prior years (2022), indigenous knowledge and value systems were not recently included in the core curriculum. This topic was peripherally discussed in a 20-hour Investigating Native Health Through Documentary Selective, which explores topics in Native health through watching various documentary films. The topics covered include:

- *Stereotypes of Native American populations in film*
- *Social determinants of health & policy*
- *Food sovereignty*
- *Significance of water*
- *Substance use and mental health*
- *Traditional medicine*
- *The impact of pipelines*
- *The consequences of polluted water on indigenous communities*

There is additionally a selective rotation with Winslow Indian Healthcare in Winslow, AZ, which allows students to “learn about Native American health, family medicine, rural medicine and/or neurology at the Winslow Indian Healthcare Center (WIHCC), which proudly serves eight-chapter communities in the Southwest region of the Navajo Nation, caring for an estimated 190,000 Native Americans.” However, both of these selective opportunities do not directly educate students on the importance of Indigenous knowledge and value systems as essential components of planetary health solutions.

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.

This topic was **briefly** covered in the **core** curriculum.

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

This topic was **not** covered.

Score Assigned:

1

Score explanation: There were multiple lectures that peripherally discuss this topic throughout the 4-year curriculum that older years (M3s/M4s) have had. Previous PHRCs have suggested having a greater focus on environmental toxins specifically though. There was a 2023 Case Study Session in the mandatory curriculum that specifically looked at the 2021 Pacific Northwest Heatwave and the disproportional impact that heat and forest fires had on the following populations:

- *Children*
- *Elderly*
- *People of color*
- *Homeless*
- *Outdoor workers*
- *People living in poverty*
- *People with heart or respiratory diseases*
- *People taking diuretic medications*

However, environmental toxins were not specifically discussed in this lecture.

There was also lecture on Climate & Health Policy Solutions to the Climate Crisis that discussed ongoing issues, inequities, and policy development related to climate change, with a focus on Minnesotans. One slide listed the following social factors that limit resilience when extreme weather events occur:

- *living in poverty*
- *living in an area of concentrated poverty and/or racially segregated housing*
- *having an underlying chronic health condition or disability*
- *language barrier*
- *housing instability*
- *being unemployed having lower levels of education*

Another slide also discussed underlying racial disparities in health in Minnesota in relation to air pollution and climate change. It specifically noted that, “Compared to white Minnesotans, Minnesotans who are Black Indigenous, or people of color experience:

Higher incidence of:

- *Infant and maternal mortality*
- *Heart disease*
- *Cancer*
- *Asthma*
- *Diabetes and other chronic illnesses*

Shorter life expectancy

- *Average lifespan is 81 years for white Minnesotans, 78 years for Black, 68 years for American Indian Minnesotans*
- *Black and American Indian infants are twice as likely to die before first birthday than white infants*

In 2024-25, general health disparities and the effects of redlining, institutional discrimination, and weathering has been discussed in our first year medical school I-DARE curriculum, but not in the level of detail that addresses the outsized impact of anthropogenic environmental toxins on marginalized populations.

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.

This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework. (1 point)	
This topic was not covered.	
Score Assigned:	1
<i>Score explanation: There is no evidence of this information being provided in the GI/Nutrition course, nor any other part of the core curriculum. The director of the GI curriculum is well-known as a plant-based diet advocate, however there are no core educational materials that tie together the environmental and health impacts of eating plant-based. There is a Lifestyle Medicine interest group which involves community gardening and discussions of the benefits of a whole-food, plant-based diet as well as a Culinary Medicine selective taught by a chef and registered dietitian.</i> <i>However, there is a Nutritional Medicine Selective offered, which “aims to narrow the gap [between the lack of nutrition education provided in the traditional medical school curriculum] by providing students a low-stress environment to complete online nutrition modules and in-person cooking sessions ... to better understand how culinary medicine is related to the areas of cardiovascular disease, diabetes, pediatrics, and cancer” However, this does not directly discuss the environmental benefits of a plant-based diet.</i>	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework. (1 point)	
This topic was not covered.	
Score Assigned:	1
<i>Score explanation: We no longer have the lectures that were initially integrated as part of the mandatory I-DARE (Inclusion, Diversity, Anti-Racism, and Equity) curriculum for the first year of medical school, which is of large concern to us as students. Discussions used to include how United States (US) healthcare is responsible for 10% of the US’s greenhouse gas (GHG) emissions and 27% of world’s healthcare GHG emissions. Some lectures in our elective coursework, including selectives like Sustainability in Medicine, etc. do cover these topics, but not as in-depth as the prior curriculum did (see 1.1).</i>	

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-medicalization 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)	1
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)	1
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)	0
<i>Score explanation:</i> 1) The Disruptions in Development Curriculum discussed the harms of over-prescribing, but the environmental effects were not discussed. In addition, the benefits of lifestyle interventions on health were discussed but not in relation to their climate impacts. 2) The Science of Healthcare Delivery (HSS) core curriculum includes sessions on high-value care which discuss the importance of utilizing resources effectively. Although they focus on cost savings and benefits to health, slides from sessions include the following discussions of environmental benefits of this approach: - "ORs produce 25-30% of total hospital waste. One routine surgery produces as much garbage as a family of 4 in one week. - The Environmental Footprint of Anesthesia / N2O Impact is 6x Worse than all VAs combined" 3) These core curricular materials are also supplemented by the 20-hour Sustainability in Medicine Selective that discusses medication recycling/re-dispensing, going green in the operating room, electric ambulances, and energy-efficient hospitals/solar panels for hospitals.	

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> 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

Score explanation: Strategies on how to discuss the health effects of climate change with patients are not taught in the current curriculum. Although we do not have formally taught strategies on discussing climate change with patients, simulated patient encounters include patients with concerns about environmental exposures.

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

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

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

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

Score Assigned:

2

Score explanation: In the Foundations of Reasoning and Application in Medicine and Science (FRAMES) curriculum, students are taught to take a full history, which includes asking about occupational exposures, pets, etc. Simulated patient encounters also include patients with concerns about environmental exposures and exposure-exacerbated asthma.

Recommendations: *However, despite this being a full score, more can be done as the curriculum does not necessarily include more explicit information and discussion about climate change exposures, such as wildfire smoke.*

Curriculum: Administrative Support for Planetary Health

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

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

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

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

Score Assigned:

0

Score explanation: There has been discussion among students with some faculty members regarding the importance of climate change as a public health issue and efforts have been made to

improve the curriculum. As part of these discussions, the 20-hour Sustainability in Medicine Selective was developed this past year. Additionally, presentations to the curriculum committee were receptive and meetings are scheduled to discuss ways of reviewing and incorporating climate change-related curricular elements. However, specifics vary from subject to subject and there is no concrete plan set to change the curriculum as it relates to ESH/planetary health.

Recommendations: As of 2025, the removal of key lectures that used to be part of the I-DARE curriculum is of concern to us, and thus we have moved this down to no improvements as this was a key concept and discussion that used to be part of the core medical school curriculum.

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:

2

Score explanation: There is minimal coverage of ESH/Planetary Health in the core curriculum, and all of the curriculum is essentially in standalone "Special Topics" lectures and elective coursework. In review of the curriculum, this appears to be a central inadequacy, as content covered in standalone lectures can vary significantly year-to-year and is not reinforced over time.

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: There is no evidence on Mayo Clinic websites that there is a dedicated faculty or staff member who is responsible for overseeing curricular integration of planetary health and sustainable healthcare. Also, there are no recollections from students of such an individual.

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

Mayo Clinic does not have any public-facing online curricular materials that reference planetary health, sustainable healthcare, or the intersections of climate change and health. The curriculum at a glance is available [here](#). Course materials are broken down by year, but there is no mention of planetary health materials nor any reference to any selectives that cover this material. Some course material objectives are shared with the curriculum mapping, but this is also not available or accessible to students. Some of the criteria listed in this report card cover specific topics to a level of detail that is not always captured in the curriculum objectives, so we cannot verify whether certain objectives mentioned here were discussed in some form in the curriculum. As MIs, we have access only to the preclerkship curriculum for our year as we go through each block and thus some lectures that may have been in the preclerkship curriculum previously (such as the climate and health lecture described in I-DARE in 2023) may have been removed or put in another part of the later curriculum. In future years, we recommend ideally having representation of multiple years on this report card team to capture potential changes and better evaluate these criteria.

Mayo Clinic Alix School of Medicine does offer a number of student-led Selective Programs that explore various topics in healthcare. These are 20-hour "elective" opportunities that supplement the core curriculum. Students have also individually found opportunities to be involved in interest groups which may delve into and/or teach topics indirectly related to planetary health -- for example, rural medicine, global health, and lifestyle medicine.

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
<i>Score explanation: There are no planetary health or healthcare sustainability research initiatives listed in the research division of Mayo Clinic. There is an Office of Sustainability at Mayo Clinic, but its function appears to operate at the administrative and business level. The link to access information about the operations of the Office of Sustainability is on the internal intranet here. Representatives of the office have given talks at the Sustainability Grand Rounds open to the wider Mayo Clinic community.</i> <i>There are faculty members in the schools of medicine and healthcare involved with studies on planetary health, environmental exposure, and healthcare sustainability research, including the Well-Living Lab collaboration focused on studying the built environment and its impact on community and human health, however, information on ongoing environmental research is not compiled in an easily accessible format.</i> <i>Specific research labs with research relating to topics of planetary health / healthcare sustainability who are technically part of the School of Medicine include the Translational Cardiovascular Disease Research Lab's work in environmental exposures and inflammatory diseases / sex differences, Human Integrative and Environmental Physiology lab, and faculty consultants have spoken on work on pharmacoe xposomics in relation to microplastics while his lab focuses on multi-omics for cholestatic liver diseases.</i>	

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

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

There is **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

Score explanation: There are no divisions, departments, or laboratories that focus on environmental issues, sustainability, or planetary health. The clinic does have an [occupational medicine](#) / environmental health and safety department.

There are faculty members involved with studies on planetary health, environmental exposure, and healthcare sustainability research, including the [Well-Living Lab](#) collaboration. However, there is no dedicated research institute or department.

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?

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)

Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)

No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)

There is **no** process, and **no** efforts to create such a process. (0 points)

Score Assigned:

2

Score explanation: Mayo Clinic has a [Research Information Center](#) where the general public may learn and give input about the decision and research agenda at Mayo Clinic. Mayo's Center for Individualized Medicine and The Integrating Special Populations Program also have a [Community Advisory Board](#) and [Pediatric Advisory Board](#), respectively, to incorporate input on the direction of institutional research for the community and key populations. However, these boards are not dedicated or geared specifically toward environmental issues.

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

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

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

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

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

Score Assigned:

2

Score explanation: Mayo Clinic has an [Environmental Stewardship](#) site which provides centralized information about current environmental goals and provides links to the needs assessment reports used to determine the goals. The needs assessment reports provide more information about the initiatives proposed to achieve those goals on an individual campus basis. However, there is no information about upcoming events, leaders in planetary health, or relevant funding opportunities. The internal Green at Mayo Clinic site is not available to the public but does update on “stewardship from patient to planet” and includes updates on the latest news surrounding the enterprise’s sustainability initiatives. Infrequently Mayo Clinic has had several “In the News” reports that cover planetary health related topics but may not necessarily be active research that all Mayo Clinic research and physician consultants participate in.

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:

3

Score explanation:

Mayo Clinic's Green Committee does have a subcommittee on Wellness and Sustainability that organizes some related events. Mayo Clinic also hosts an annual [Holistic Health and Well-Being Conference](#) which discusses planetary health principles.

Additionally, Mayo Clinic hosts numerous CME courses, Grand Rounds, and conferences across different specialties, including in Infectious Diseases, Allergy and Immunology, and Ophthalmology that sometimes connect with planetary health principles. However, these are not focused on planetary health topics specifically.

In 2025, a local community clinic and foundation which Mayo Clinic collaborates with is holding a [symposium and gala focused on community wellness](#), plant-based diets, food addiction and mental health, and other related topics.

Other events Mayo Clinic has hosted, participated in, or sponsored, include:

- the [One Healthcare Eco Challenge](#)
- [Rochester EarthFest](#)
- [An Annual Waste and Recycling Fair](#) for employees
- Downtown Rochester Farmers Market
- [Colleagues discuss passion for environmental stewardship. Mayo's sustainability efforts | In the Loop](#) (April 18, 2024)
- [Action Guide: Emerging Climate Careers — The Great Northern](#) (January 25, 2025)
- Leadership Greater Rochester – 'Building a Sustainable Community' Day – participated on a business panel to discuss infrastructure & sustainability (Feb. 13, 2025)

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

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

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

Score Assigned:

1

Score explanation: Mayo Clinic is a member of the national organization, [Practice Greenhealth](#), and has initiated several plans and case study initiatives with the same group. MCASOM is also listed as a member 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 **institution** partner with community organisations to promote planetary and health?

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

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

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

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

Score Assigned:

3

Score explanation: MCASOM collaborates with the [Zumbro Valley Medical Society](#), a local society for physicians in southern Minnesota. One of Zumbro Valley Medical Society's core goals is to support environmental sustainability as outlined in the about section of their website. Medical students have the opportunity to join various committees, one of which is the [Eco-Public Health Committee](#). In 2024, MCASOM's lifestyle medicine student interest group began partnering with the [Lotus Health Foundation's Pharmacy Rx](#), an organization focused on providing healthy nutritious food and health information to the community and cultivating a community garden. Since 2021, Mayo Clinic has partnered with the City of Rochester in developing [bus rapid transit in downtown Rochester](#). Additionally, Mayo Clinic serves a platinum sponsor of [Rochester's Annual EarthFest Expo](#), an event celebrating sustainability, environmental stewardship, and community connection.

MCASOM also collaborates with the [Landing \(Free Clinic\)](#) and [Christ United Methodist Church \(Culinary Medicine\)](#). Although not always directly related to climate change, principles throughout these organizations emphasize health disparities, local environments, and sustainability. There is still room for dedicated environmental-partnerships from the medical school, however.

3.2. Does your **institution** 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:	1
<i>Score explanation: Mayo Clinic has participated in two virtual events currently available online through the Office of Sustainability. Both of these events focused on ways in which Mayo is working to reduce its environmental impact. Individuals representing Mayo Clinic presented "Better Climate Challenge – Mayo Clinic's Commitment & Strategies" describing how Mayo has joined the Better Climate Challenge, an initiative to reduce greenhouse gas emissions. The other presentation given titled "SI Chats - Mayo's New La Crosse Hospital" highlighted sustainability efforts at a newly built hospital in the Mayo system. In 2024, Mayo Clinic's Grounds Supervisor presented new campus sustainability efforts at the Rochester Green Drinks organization. This presentation specifically covered the campus tree inventory, sustainable landscape techniques, and Mayo Clinic's efforts to electrify landscape equipment. Additionally, representatives of Mayo Clinic participated on a business panel to discuss infrastructure and sustainability during the Rochester Area Chamber of Commerce Leadership Greater Rochester – 'Building a Sustainable Community' day. There is no evidence of the medical school organizing community-facing events regarding planetary health in 2024.</i>	

3.3. Does your <u>institution</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to some courses . (1 point)	
Students do not receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> <i>Students are included in email invitations to Sustainability Grand Rounds (discussed in 3.4); however, these rounds are not specifically targeted at students. Additionally, they are able to join internal broadcast channels on sustainability from the Green Committee or Mayo communications, but the general student population does not receive notifications from these groups.</i>	

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?

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)

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)

There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:

2

Score explanation:

As of April 2021, Mayo began hosting Sustainability Grand Rounds every other month. Some topics for 2024 included “Rooted in Wellness: Trees as Partners in Health and Healing”, “Rochester Air Network”, and “Genomics Environmental Exposure and Health”. In 2022, Mayo also hosted a “Seminar for Nurse Anesthetists” for continuing education credits that included a lecture called “Code Blue, Location Earth: Climate Change, Health Impacts and how Anesthesia Professionals Can Make a Difference.”

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:

2

Score explanation: Mayo has created disease-specific handouts that mention the effects of environmental exposures. One patient education handout entitled “[Seven Strategies for Cancer Prevention](#)” includes limiting exposure to second-hand smoke and pesticides on produce. Another handout entitled “Healthy Nutrition and Cancer” mentions organic foods, but states they have not been definitively associated with lower cancer risk. “[Instructions for Men to Maximize Sperm Quality for Fertilization](#)” recommends avoiding environmental exposures such as herbicides and pesticides. These handouts are available online for use at all Mayo campuses. There are also several online educational resources about environmental exposure and human health. There are two video podcasts explaining [how a lifetime of exposures impacts health](#) and the [exposome: 2020 and beyond](#).” Additionally there is a brief article explaining [how environmental exposure contributes to human disease](#).

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:	2
<i>Score explanation: There is no single comprehensive article on the link between planetary and human health as a whole. However, there are several articles, videos, and podcast episodes available online through the institution's webpages, Youtube, Spotify, and other social-media accounts. There are several educational resources about environmental exposure and human health. There are two video podcasts explaining how a lifetime of exposures impacts health and the exposome: 2020 and beyond." Additionally there are brief articles explaining how environmental exposure contributes to human disease and overiewing environmental health. There is also a podcast Q&A about the effects of climate change on global childhood health, another podcast episode on climate change and emergency medicine, and a news article about climate change and tick-borne infections. All of these resources are available to patients at all campuses. However, access to these resources are limited by patients' access to the internet.</i>	
Section Total (12 out of 14)	
85.71%	

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your <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
<i>Score explanation: MCASOM certainly encourages sustainability related projects, and there are grants available at an institutional level for QI projects. These grants are available to students. These grants are specifically targeted towards sustainability. However, there are no sustainability-related QI projects mandated as part of the curriculum.</i>	

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
<i>Score explanation: Students in both the Minnesota and Jacksonville campuses have opportunities to participate in research related to climate change and planetary health with certain faculty advisors. However,</i>	

there are no distinction tracks, fellowship programs, or special concentrations specifically dedicated to sustainability.

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

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

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the 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: Mayo Clinic has an accessible institutional [webpage](#) that highlights current activities related to sustainability and planetary health. However, it is difficult to identify mentors involved with sustainable healthcare initiatives using the above-mentioned webpage.

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 institution dedicated to planetary health or sustainability in healthcare. (2 points)

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

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

Score Assigned:

2

Score explanation: At Mayo Clinic, there is an [Initiative for Medical Equipments Sustainability](#) that is listed as part of the Graduate School. The Initiative for Medical Equipment Sustainability is a student group on the Rochester campus that is dedicated to empowering healthcare professionals and technicians in developing countries through outreach focused on sustainable medical equipment and technology. There was an originally NIH-funded [Lifestyle Medicine group](#) with similar aims that approaches sustainability from a lifestyle perspective, with inclusion of discussion topics such as a whole, plant-based food diet and gardening as activities students can engage in.

However, the group is led primarily by Mayo-affiliated Rochester Community Clinic through the Lotus Foundation.

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?

Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)

No, there is no such student representative. (0 points)

Score Assigned:

1

*Score explanation: There is one position within the Mayo Clinic Sustainability subcommittee for a medical student. Students are welcome to partake in the Green Advocate program as well, which encourages initiatives to impact sustainability within different divisions of Mayo Clinic's workforce. **Recommendations:** A welcome addition to the Mayo Clinic TA program might be one or two students to peruse the curriculum and recommend places to incorporate sustainability and environmental health.*

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.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<i>Score explanation:</i> <i>The Lifestyle Medicine interest group helps with the community garden led by the Rochester Community Clinic. They also gave a talk about the epigenetics of cancer and its linkages to diet, lifestyle, and other factors.</i>	

2. *Mayo Clinic hosts the Sustainability Grand Rounds for trainees and employees of the clinic to become more aware of sustainability efforts and issues around Mayo. Students are a welcome part of this audience.*
3. *n/a*
4. *n/a*
5. *Students are allowed to partake in the Green Advocate program, where they can take initiative to best advocate for sustainability projects that might help the greater community.*
6. *The Mayo Clinic allows students to participate in a camping trip via the [Wilderness Medicine Selective](#), which allows students to immerse themselves in the wilderness through a camping and hiking excursion.*

Section Total (11 out of 15)

73.33%

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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 institutions, 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:	3
Score explanation: Mayo Clinic is exclusively health-focused with no associated undergraduate campus, thus there are currently only two salaried full-time sustainability staff member overseeing programs and efforts in healthcare sustainability programs enterprise-wide and for the hospital. There are physicians, technicians, and other full-time staff members involved in programs related to sustainability, including those chairing the Mayo Clinic Green Committee, an energy engineer, and full-time staff members dedicated to running the recycling program on the Rochester campus.	

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

Score explanation: The Mayo Clinic has invested in greenhouse gas reduction, however they currently have no official plan for carbon neutrality. In 2011, Mayo Clinic pledged to reduce emissions by 20% through the [Better Climate challenge](#), run through the United States (US) Department of Energy. They met this goal several years early. They [subsequently pledged to reduce Greenhouse Gas Emissions by 50% by 2032](#).

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

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

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

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

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

Score Assigned:

0

Score explanation: Mayo Clinic Rochester utilizes less than 1% renewable energy, attributable to one parking ramp equipped with 462 solar panels on the downtown campus. However, this parking ramp has plans for demolition in future years to make room for additional Destination Medical Center Investments. Sustainable construction and building plans have not been released for this project yet. Most sustainability initiatives focus around energy efficiency rather than utilizing renewable energy. Mayo Clinic was the recipient of [2023 and 2024 Practice Greenhealth environmental excellence awards \(Emerald Award, Greening the OR award, Food Circle\)](#) for these efforts at its smaller sites and for some of its efforts on the Rochester campus. [There is a plan to put in place a geothermal system estimated to reduce emissions by 10%](#).

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

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

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

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

Sustainability is **not considered** in the construction of new buildings. (0 points)

Score Assigned:

3

Score explanation: All older buildings in the Rochester campus have been retrofitted. According to a [Mayo Clinic News Network publication](#), these changes have included “projects like:

- Installing energy-efficient LED lighting in buildings and staff ramps
- Updating to more efficient computer workstations
- Recalibrating building automation systems that control a building's energy needs
- Resealing ducts”

The Mayo Clinic also participates in the [Better Buildings Alliance](#) through the Department of Energy, and new buildings must comply with institutional sustainability guidelines modeled on LEED, however they are not LEED certified. With the Mayo Clinic Bold. Forward. Unbound. project there is a commitment to [have all new buildings as part of this project also supported by geothermal power](#).

5.5. Has the institution 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

Score explanation: [Students](#) have access to a free intercampus shuttle and are eligible for free Rochester Public Transport bus passes. There are bike racks and protected bike rooms on both Rochester campuses, and the Mayo Clinic is recognized as a bronze level bicycle friendly business by the [League of American Bicyclists](#). Active transportation modes are also emphasized during orientation, with a lecture and bike event. However, bicycle commuting is limited by poor bicycle infrastructure between campuses and in [other parts of the city](#). There are safety concerns with this option, as three students were hit by cars during their active commute in 2022 and bikes have been stolen. Additionally, it can be extremely difficult to access off-campus clinical locations without a car.

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: Information on [waste management is included on a community engagement page](#) that dives deeper into environmental stewardship. Food waste on an institutional level is composted or repurposed into animal feed, and this primarily occurs from the hospital cafeterias. There is no traditional composting program within the medical school and no organic waste containers in any of the medical school buildings. Recycling is available in all medical school buildings. There is now a Green Printing program available in the libraries and learning resource center at Mayo Clinic to reduce the accidental use of paper and printing.

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

Score explanation: Mayo Clinic as an enterprise contracts with Morrison/Compass Group which provides food service for the cafeterias which many employees as well as MCASOM students access. They have several guidelines regarding general purchasing policies for [animal welfare](#) and a [sustainability report which does state an aim to reduce food waste, contribute to 9 of the UN Sustainable Development Goals, and a "Planet Promise" roadmap with a commitment to achieve climate net zero globally by 2050 for their company](#). Morrison/Compass group is a major caterer of campus events and many employees make use of their employee cafeterias on campus here in Rochester. From experience, students have been able to find a decent amount of food options within their dietary restrictions including gluten-free, halal, and so forth. Institutional food service sustainability goals do exist, including the discontinuation of styrofoam and increased selection of plant-based options and local foods (Revol Greens from Owatonna). The Rochester Food Service team did receive a Circle of Excellence award for Food from Practice Greenhealth last year for

their great work purchasing local and sustainable food, reducing meat consumption, and reducing food waste. This award is given to the top 10 facilities of all applicants.

Recommendations: *It would be ideal if guidelines could at least be developed and published with suggestions for on-campus events or guidelines on local sourcing partners. While the efforts by the contractor are significant, it would be great to see the institution's specific contracts and potential options to include meat-free days or no red-meat as a potential option or promoted suggestion in the cafeterias. It is great to see the institution's focus on increasing local foods, sustainability, organic food given our presence and location here in Minnesota.*

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

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

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

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

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

Score Assigned:

1

Score explanation: There are [institutional sustainability guidelines](#) for supply procurement, and the Mayo Clinic became a founding member of [Greenhealth Exchange](#) (a marketplace for sustainable purchasing) in 2017. However, the medical school is not engaged in efforts to increase procurement sustainability. Only items purchased through Mayo Clinic institutional channels are required to comply with Mayo Clinic guidelines.

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

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

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

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

Score Assigned:

0

Score explanation: The institution currently has no recommendations, incentives, or rules around sustainability of events.

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:

1

Score explanation: There are institutional guidelines, including a [Green the Lab checklist](#) (available only on the Mayo Clinic intranet on the [Green @ Mayo Clinic](#) page), to make the lab spaces more sustainable, but not necessarily programs or initiatives to assist with this. The checklist links to this external resource: [My Green Lab](#).

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:

0

Score explanation: Mayo Clinic has several investments in fossil-fuel companies in Oklahoma and Texas. Oil and gas interests were originally [donated](#) to the Mayo Clinic in the 1990s and have since been expanded under the company [Latigo](#). As of 2023, Mayo Clinic had [\\$1.45 billion](#) holdings and investments in fossil fuels. Cumulatively, Mayo Clinic has made \$190 million in royalty income from these donated oil fields. There have been efforts to increase investments in Environmental Sustainability Goals (ESGs), but no current initiative to divest from fossil fuels. Possible future green energy company investments such as in solar panels, etc. might be in discussion, but nothing significant at the moment.

Section Total (12 out of 32)

37.50%

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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 Mayo Clinic Alix School of Medicine

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(23/72) \times 100 = 31.94\%$	D
Interdisciplinary Research (17.5%)	$(11/17) \times 100 = 64.71\%$	B-
Community Outreach and Advocacy (17.5%)	$(12/14) \times 100 = 85.71\%$	A
Support for Student-led Planetary Health Initiatives (17.5%)	$(11/15) \times 100 = 73.33\%$	B
Campus Sustainability (17.5%)	$(12/32) \times 100 = 37.50\%$	D+
Institutional Grade	$(31.9 \times 0.3 + 64.7 \times 0.175 + 85.7 \times 0.175 + 73.0 \times 0.175 + 37.5 \times 0.175) = 55.30\%$	C+

Report Card Trends

Section Overview

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

