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# Planetary Health Report Card (Medicine): *Albert Einstein College of Medicine*

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Albert Einstein College of Medicine

2022-2023 Contributing Team:

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## Summary of Findings

Overall	C
<u>Curriculum</u>	B
<ul style="list-style-type: none"> <li>• Inclusion of planetary health (PH) topics in the preclinical core curriculum at Einstein was greatly increased by introducing PH-focused lectures into the Health Systems and Health Equity course, as well as by integrating climate change/health impact material into a number of foundational and organ system courses.</li> <li>• <b>Recommendations:</b> Although there was some successful integration of PH topics into lectures, these topics could be discussed in greater depth; this would require more commitment from course directors and lecturers. Einstein's Introduction to Clinical Medicine course provides an opportunity to include important topics in the core curriculum, such as environmental history taking and discussing the effects of climate change with patients.</li> </ul>	
<u>Interdisciplinary Research</u>	D -
<ul style="list-style-type: none"> <li>• Einstein is home to a handful of researchers primarily engaged in PH research. Development of a website for environmental and global health is currently underway, which will improve student access to these resources.</li> <li>• <b>Recommendations:</b> Einstein could consider holding a conference related to PH, joining a national or international PH organization, and implementing a process in which community members impacted by environmental injustice can provide input regarding the environmental research agenda. Instituting an interdisciplinary department could be a longer term goal.</li> </ul>	
<u>Community Outreach and Advocacy</u>	C +
<ul style="list-style-type: none"> <li>• The preclinical Service Learning course allows students to work with several PH-related organizations within the Bronx. Student groups partner with community organizations to promote environmental health as well. Einstein's affiliated hospitals have online educational materials about environmental health exposures.</li> <li>• <b>Recommendations:</b> Einstein or affiliated hospitals should develop educational materials about the health effects of climate change and offer them as well as already existing resources in printed form. Einstein should consider offering PH courses for post-graduate providers, as well as regularly communicating with students about efforts and updates regarding PH and sustainable healthcare.</li> </ul>	
<u>Support for Student-Led Initiatives</u>	B
<ul style="list-style-type: none"> <li>• Einstein has several student groups dedicated to planetary health. Einstein Sustainability Club (ESC) works closely with faculty to make curriculum changes and integrate sustainability initiatives and opportunities into education and student life. In addition, Einstein offers opportunities for students to participate in co-curricular planetary health programs, such as One Health or the Global Health Fellowship.</li> <li>• <b>Recommendations:</b> There is no formal support for student-led initiatives nor any online resources dedicated to facilitating student success in PH projects. We recommend that the medical school increase support for students interested in sustainable initiatives, perhaps by creating a website that connects students with available PH mentors or opportunities, and/or prioritizing grants for related research.</li> </ul>	
<u>Campus Sustainability</u>	D
<ul style="list-style-type: none"> <li>• Einstein has an Office of Energy and Sustainability dedicated to improving the environmental impact of campus practices. Shuttle transportation and recycling services in student housing are two well-established efforts that can serve as foundations for more comprehensive sustainability programs.</li> <li>• <b>Recommendations:</b> There is still much to improve with the campus sustainability. While there are some goals already in place, we strongly recommend introducing sustainable guidelines for events and daily campus life.</li> </ul>	

# Statement of Purpose

*Planetary health is human health.*

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

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

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

# Definitions & Other Considerations

## Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “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 medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **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 vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (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. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions providers are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mold after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Clerkship:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

**Other considerations:**

- If there are more than one "tracks" at your medical school 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).

**Added to our resources last year, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.**

# Planetary Health Curriculum

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

## *Curriculum: General*

1. Did your <b>medical school</b> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does <b>not</b> have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a <b>lecture</b> on planetary health.
0	No, the medical school has <b>not</b> offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
Score explanation: Albert Einstein College of Medicine does not offer elective courses on planetary health topics.	

## *Curriculum: Health Effects of Climate Change*

2. Does your <b>medical school</b> curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
Score explanation: As part of the M1 core curriculum, several lectures in the Health Systems & Health Equity course explore the effects of extreme heat and climate change on health risk. A lecture titled "Sustainability in Healthcare" provides a list of health risks caused by extreme heat. Another lecture, "Climate Change and Health Equity," features several slides discussing the effects of rising temperature related to heat stress, food supply and safety, water quality, and health risks. The Climate	

Justice pre-session [recommended](#) and [required](#) readings also include topics on extreme heat and health risks.

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

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

*Score explanation: Several lectures in Einstein's M1 core curriculum course "Health Systems & Health Equity" discuss this topic. A lecture titled "Climate Change and Health Equity" includes multiple slides explaining the impact of extreme weather events on both individual health and the healthcare system, using recent hurricanes as an example. Additionally, the Climate Justice pre-session readings (linked [here](#), [here](#), and [here](#)) included several articles discussing extreme weather events and the health risk they pose.*

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

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

*Score explanation: Einstein's M1 core curriculum course "Health Systems & Health Equity" includes a lecture titled "Climate Change and Health Equity." Several slides in this lecture show that climate change has led to increased risk of vector-borne infectious disease such as malaria and dengue, using several graphics and illustrations. A slide in another lecture titled "Sustainability in Healthcare" lists diseases linked to changes in vector ecology due to climate change.*

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

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

*Score explanation: In the Health Systems and Health Equity course, a lecture titled “Climate Change and Health Equity” mentions how air pollution contributes negatively to respiratory health, such as asthma, COPD, and allergies. Additionally, the [NEJM module on climate change](#) (listed as required preparation for the lecture) discusses specific factors of pulmonary disease that are a direct consequence of climate change, along with several resources/articles on the topic, and this information is echoed in the corresponding lecture.*

*In the Pulmonary System course, a lecture titled “Asthma and COPD” identifies air pollutants caused by industrial emissions and automobile exhaust as triggers of asthma. This lecture also identifies outdoor air pollution, indoor air pollution (from heating and cooking with biomass), and occupational dusts as environmental exposures that can increase risk of COPD.*

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

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

*Score explanation: In the Health Systems and Health Equity course, a lecture titled “Climate Change and Health Equity” briefly mentions that air pollution raises the risk of cardiovascular events. Additionally, the [NEJM module on climate change](#) (listed as required preparation for the lecture) discusses specific factors of CV disease that are a direct consequence of climate change, along with several resources/articles on the topic, but this information is not adequately integrated into the lecture.*

*While the cardiovascular course cites “Environmental/SDOH” factors as a set of reasons why cardiovascular health disparities exist, it falls short of explicitly acknowledging or explaining the contribution of climate change or pollution on patient health outcomes. Additionally, while a summary slide in lecture 2.9 (Cardiovascular Health Disparities in Underrepresented Racial/Ethnic Groups, slide 45) includes a figure on the elements of systemic racism, which identifies pollutant exposure as a community-level factor contributing to systemic racism, the lecture slide (and the lecture as a whole) fails to establish an explicit connection between such environmental exposures and cardiovascular health. Furthermore, lecture 2.2 (Risk Factors and Prevention of Atherosclerotic Cardiovascular Disease) provides no mention of the effects of climate change or its attributes (e.g. pollution, heat waves) on cardiovascular health or the increased risk of CV events.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.



0	This topic was <b>not</b> covered.
<p><i>Score explanation: In the Health Systems and Health Equity course, a lecture titled “Climate Change and Health Equity” briefly mentions that extreme weather events can impact mental health, but does not elaborate on the manifestations of these impacts further than simply stating that they exist. Additionally, the <a href="#">NEJM module on climate change</a> (listed as required preparation for the lecture) discusses specific factors of mental health conditions to which climate change contributes, along with several resources/articles on the topic, but this information is not adequately integrated into the lecture.</i></p> <p><i>In the Psychiatry section of the Neuroscience and Human Behavior course, lecture 3.3 (Depression, slide 16) includes a slide on planetary health and depression (courtesy of the Einstein Sustainability Club) citing examples of the increased prevalence of depression as a result of direct and indirect factors and events precipitated by climate change, followed by a list of relevant readings recommended by the Einstein Sustainability Club.</i></p> <p><i>Additionally, lecture 2.14 of the Neurology section includes a slide (courtesy of the Einstein Sustainability Club) discussing how increased heat exposure can result in neuroinflammation and oxidative stress, associated w/ protein misfolding seen in various causes of dementia.</i></p>	

8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: Einstein’s M1 core curriculum course “Health Systems &amp; Health Equity” includes a lecture titled “Climate Change and Health Equity.” A couple of slides in this lecture show that climate change has an effect on immunologic, pulmonary and cardiac diseases such as worsened allergies, asthma and COPD. Another slide mentions the effect of climate change on water quality and quantity and how it may affect health, affecting access to food and water and increased likelihood of GI pathogens. There were required readings before this lecture that also detailed health risks that could be caused in each body system due to the impact of climate change.</i></p> <p><i>In the Endocrine System course, a lecture titled “Treatment of Obesity” included a slide titled “Obesity, Malnutrition, and Climate Change.” This slide describes a 2019 report which states that obesity and climate change are driven by high consumption of cheap energy sources and the impacts of climate change (such as drought) can create food insecurity and ultimately malnutrition. It also states that solutions to obesity and malnutrition (such as improving food systems) would also address climate change.</i></p>	

9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.

2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: Einstein's M1 core curriculum course "Health Systems & Health Equity" includes a lecture titled "Climate Change and Health Equity." A few slides in this lecture show that climate change affects marginalized populations. One slide contains an image depicting how children, older adults, low income communities, and communities of color are at higher risk for heat stroke, exposure to pollutants, and vulnerability during extreme weather events. The slide also adds suggestions on how to mitigate these risks. Another slide states that climate change is a social determinant of health that worsens and exacerbates existing inequalities for marginalized populations. This lecture included [required readings](#) and a [prelecture assignment](#) which detailed the impact that climate change has on vulnerable populations and the importance of focusing on these populations when trying to improve risks of climate change.*

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

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

*Score explanation: Einstein's M1 core curriculum course "Health Systems & Health Equity" includes a lecture titled "Climate Change and Health Equity." A couple of slides in this lecture address the unequal regional impacts of climate change globally. One lecture slide contains two images: the first shows the world map with countries enlarged or shrunk based on carbon usage, the other image shows the countries enlarged or shrunk based on mortality in regional distribution of four climate sensitive health consequences. Another slide states that the poorest one billion people only produce 3% of greenhouse gas emissions, however they are the most vulnerable to the effects of climate change. One of the [required readings](#) for this session also addresses climate inequity.*

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

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

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

*Score explanation: This topic was not covered in the core curriculum.*

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

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

*Score explanation: In a first-year course Health Systems and Health Equity, a lecture titled "Climate Change and Health Equity" reviewed known associations between higher incidence of pulmonary diseases such as asthma and air pollution created by the Cross Bronx Expressway. A second lecture titled "Sustainability in Healthcare at Montefiore" reviewed the decarbonizing plan at Montefiore and Einstein, emphasizing a need to reduce carbon emissions and air pollution due to the particularly high burden of pulmonary disease presentation at their emergency department(s). A third lecture titled "The Bronx and Sustainability" discussed the disproportionate impact of negative environmental consequences from industrial and commercial developments on Bronx residents.*

*In the Pulmonary System course a lecture titled "Asthma & COPD" includes a slide titled "Health Impacts of PM," which details the effects of both coarse and fine particulate matter. The slide states that air pollutants suppress genes that regulate the immune system's ability to differentiate allergens from bacteria precipitating an inflammatory response against allergens resulting in asthma.*

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

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

*Score explanation: In a first-year course Health Systems and Health Equity, a lecture titled "Climate Change and Health Equity" employed an example of displacement of a coastal Native American tribe in Louisiana to demonstrate the impact of rising sea levels on Americans. A second lecture titled "Racism in Medicine" paid homage to the indigenous inhabitants of the Bronx, the Lenape Native Americans, in a larger discussion of the colonial roots of medicine i.e., minimizing the impact of disease on patients based on race and ethnicity. While these examples echo an expanding perspective, neither lecture included a concrete discussion of indigenous value systems as components of planetary health solutions. In the first block of a longitudinal course, Introduction to Clinical Medicine: Communication Skills, a small group discussion on Culturally Sensitive Medical Interviewing presents a compelling opportunity to expand on the role of environment and spirituality in indigenous value systems to elicit a comprehensive explanatory model of illness.*

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

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

*Score explanation: In a first year course titled “Health Systems and Health Equity,” this topic is addressed in several lectures, required assignments, and a small group discussion. In a lecture titled “Social/Structural Determinants of Health,” the idea of anthropogenic toxins having disproportionate impacts is introduced using the local example of the Cross Bronx Expressway and its impact on nearby asthma rates in the Bronx. In a later lecture titled “Climate Change and Health Equity,” this idea is revisited from a global perspective in light of climate change as a whole and includes a graphic specifically highlighting the disproportional effects of greenhouse gasses and pollutants. In another lecture, “Sustainability in Healthcare,” a slide compares both measured air pollution levels and asthma rates between areas with marginalized populations in the Bronx and the rest of New York City. In a final lecture titled “The Bronx and Sustainability,” several examples of local projects that are combating the outsized effects of environmental toxins are discussed in depth. Aside from lectures, first year students are also required to read the article “[Put Equity First in Climate Adaptation](#)” and watch a brief lecture called “[Climate Change, Health and Health Equity](#)” on YouTube, where topics such as pollution gaps experienced by marginalized communities are discussed. Students are required to complete a writing assignment discussing these pollution and climate gaps prior to attending the small group session.*

**Curriculum: Sustainability**

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

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

*Score explanation: The environmental and health co-benefits of a plant-based diet are mentioned several times throughout the preclinical curriculum at times simultaneously, but also sometimes independent of each other. The Health Systems and Health Equity course included a lecture called “Climate Change and Health Equity,” which simultaneously mentioned the co-benefits, specifically those of cardiovascular health and the reduction of greenhouse gas pollution. Within the same course, in a lecture titled “Sustainability in Healthcare,” the environmental benefits were mentioned while describing Montefiore’s efforts to reduce the use of animal-based meals. In the Cardiovascular System course, a lecture about cardiovascular disease and protective factors discussed the health benefits of a plant-based diet. In the Nutrition and Health elective course, plant-based diets were discussed in more detail, but not in the context of their environmental benefits.*

16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: Within the preclinical course “Health Systems and Health Equity,” the lecture titled “Climate Change and Health Equity” names hospitals as the largest contributor of healthcare’s carbon footprint and briefly mentions actions to reduce this phenomenon. In the same course, a lecture titled “Sustainability in Healthcare” describes the carbon footprint of healthcare systems in depth, highlighting energy and waste elimination and actions taken specifically by the Montefiore Health Network to manage and reduce its carbon footprint.</i></p>	

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

	<p><i>In the Health Systems and Health Equity course, a lecture titled “Climate Justice” mentions the benefits of reduced meat consumption on health and the environment. Another lecture in this course, titled “Sustainability at Einstein/Montefiore,” describes waste production at the institution and working on minimizing scope 1, 2, and 3 waste. This lecture also discussed the environmental impact of surgical care and how Montefiore is working to mitigate these impacts.</i></p>
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**Curriculum: Clinical Applications**

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?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the <b>core</b> curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in <b>elective</b> coursework.
0	No, there are <b>not</b> strategies introduced for having conversations with patients about climate change
<p><i>Score explanation: Einstein’s core curriculum does not include strategies for having conversations with patients about climate change.</i></p>	

19. In training for patient encounters, does your <u>medical school’s</u> curriculum introduce strategies for taking an environmental history or exposure history?	
2	Yes, the <b>core</b> curriculum includes strategies for taking an environmental history.
1	Only <b>elective</b> coursework includes strategies for taking an environmental history.
0	No, the curriculum does <b>not</b> include strategies for taking an environmental history.
<p><i>Score explanation: Though students get passive exposure to a template used to conduct an environmental history including lead exposure, potential asthma exacerbators, and other factors in pediatrics clerkships, they are not given specific training for how to elicit this history.</i></p>	

**Curriculum: Administrative Support for Planetary Health**

20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
4	Yes, the medical school is currently in the process of making <b>major</b> improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making <b>minor</b> improvements to ESH/planetary health education.

0	No, there are <b>no</b> improvements to planetary health education in progress.
<p><i>Score explanation: Currently, improvements to ESH/planetary health education are being made on a class by class basis and are being driven by student advocacy. Planning is underway to make improvements in a more organized and consistent fashion, but has not yet taken shape.</i></p>	

<b>21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?</b>	
6	Planetary health/ESH topics are <b>well integrated</b> into the core medical school curriculum.
4	<b>Some</b> planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in <b>(a) standalone lecture(s)</b> .
0	There is <b>minimal/no</b> education for sustainable healthcare.
<p><i>Score explanation: Planetary health and ESH topics are covered broadly through three lectures in the Health Systems and Health Equity course. Additionally, planetary health/ESH topics have been integrated into multiple lectures in the organ systems courses throughout the preclinical curriculum. Integration of history taking and clinical skills related to planetary health/ESH could be more developed.</i></p>	

<b>22. Does your <u>medical school</u> 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?</b>	
1	<b>Yes, the medical school</b> has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
0	<b>No, the medical school</b> does <b>not</b> have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
<p><i>Score explanation: Rubayat H. Qadeer, M.D. is responsible for overseeing curricular integration of planetary health and sustainable healthcare.</i></p>	

<b>Section Total (52 out of 72)</b>	<b>52</b>
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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.*

# Interdisciplinary Research

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

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the <b>medical school</b> who have a <b>primary</b> research focus in planetary health <b>or</b> healthcare sustainability.
2	Yes, there are individual faculty members at the <b>medical school</b> who are conducting research <b>related</b> to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the <b>institution</b> , but none associated with the medical school.
0	No, there are <b>no</b> planetary health and/or healthcare sustainability researchers at the <b>institution</b> or <b>medical school</b> at this time.
<p><i>Score explanation: There are several faculty members who investigate the effects of pollutants on human health. Dr. H. Dean Hosgood is an Associate Professor in the Department of Epidemiology and Population Health whose research studies how environmental exposures influence cancer susceptibility and develops the <a href="#">Household Air Pollution Consortium</a> to collect data exploring the relationship between household air pollution and lung cancer death. Dr. Michael Aschner is a Professor of Molecular Pharmacology at Einstein whose research studies the effects of metals on the brain, such as the neurotoxicity of manganese.</i></p>	

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



*Score explanation: The Albert Einstein College of Medicine does not have a dedicated department or institute for interdisciplinary planetary health research. However, there is an Environmental Health and Safety department that is dedicated to occupational and environmental health.*

**3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your medical school?**

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

*Score explanation: There is no such process and there are no known efforts to create such a process.*

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

3	There is an <b>easy-to-use, adequately comprehensive</b> website that <b>centralizes</b> various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that <b>attempts to centralize</b> various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The <b>institution</b> has an <b>Office of Sustainability website</b> that includes <b>some</b> resources related to health and the environment.
0	There is <b>no</b> website.

*Score explanation: Einstein does have an [Office of Energy & Sustainability](#), but there is no information about research related to health and the environment. Currently, there is an effort to develop a website including campus resources and research related to global health and the environment.*

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

4	Yes, the <b>medical school</b> has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to planetary health in the past year.

2	Yes, the <b>institution</b> has hosted a conference on topics related to planetary health in the past three years.
1	The <b>institution</b> has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the <b>institution</b> has not hosted a conference on topics related to planetary health in the past three years.
<p><i>Score explanation: Einstein has not recently hosted a conference or symposium on topics related to planetary health. A conference called Application of the One Health Approach to Global Health Centers was held in December 2018, focusing on the interconnectedness of health and the environment, however this event occurred over four years ago.</i></p>	

<b>6. Is your <u>medical school</u> a member of a national or international planetary health or ESH organization?</b>	
1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is <b>not</b> a member of such an organization
<p><i>Score explanation: Albert Einstein College of Medicine is not a member of such organizations.</i></p>	

<b>Section Total (4 out of 17)</b>	<b>4</b>
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*Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

## Community Outreach and Advocacy

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

1. Does your <b>medical school</b> partner with community organizations to promote planetary and environmental health?	
3	Yes, the <b>medical school</b> meaningfully partners with <b>multiple</b> community organizations to promote planetary and environmental health.
2	Yes, the <b>medical school</b> meaningfully partners with <b>one</b> community organization to promote planetary and environmental health.
1	The <b>institution</b> partners with community organizations, but the medical school is not part of that partnership.
0	No, there is <b>no</b> such meaningful community partnership.
<p><i>Score explanation: Einstein's curricular service learning includes environmental justice and sustainability <a href="#">service learning opportunities</a>. Students can conduct their service learning at sites including the Center for the Urban River at Beczak, Friends of Pelham Parkway, and the Bronx River Alliance. Additionally, students can engage in service at the Mosholu Montefiore Community Center aeroponics gardens. Through the Food Justice and Medicine group, students can also engage in service work that includes composting and bringing surplus produce to community fridges with Grassroots Grocery, which helps provide food security and reduces food waste. Additionally, the Einstein Sustainability Club has begun regular volunteer days with the Bronx River Alliance. Bronx One Policy, a health advocacy group at Einstein, has also worked with local groups in advocating for capping the Cross Bronx Expressway and making other changes to transit policy to address air pollution and its disproportionate burden on Bronx residents.</i></p>	

2. Does your <b>medical school</b> offer community-facing courses or events regarding planetary health?	
3	The <b>medical school</b> offers community-facing courses or events at least once every year.
2	The <b>medical school</b> offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The <b>institution</b> has offered community-facing courses or events, but the <b>medical school</b> was not involved in planning those courses or events.
0	The <b>institution/medical school</b> have not offered such community-facing courses or events.

*Score explanation: The Department of Family and Social Medicine hosts monthly [Social Medicine Rounds](#), a lecture series for community members and medical school staff and students to discuss medical, economic and psychosocial issues impacting the health and wellness of the Bronx community. This year, September rounds were focused on climate justice. Additionally, the rounds planning committee works to include climate-related discussion around each of its topics.*

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

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

*Score explanation: There is no regular coverage of planetary health or sustainability in the updates provided by school administrators.*

**4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?**

2	Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health.
1	Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are <b>no</b> such accessible courses for post-graduate providers

*Score explanation: There is no sign that our institution provides engagement with post-graduates or makes any effort to provide opportunities to continue education in planetary health or sustainable healthcare. Currently there are efforts to develop two lectures centered on a climate change curriculum within the Pediatric Residency Program and Montefiore. Otherwise, there are no resources provided or promoted by the institution that focus on ensuring knowledge and skills in these areas.*

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

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

Score explanation: Montefiore's website includes information about [environmental illnesses](#). One suggestion for improvement is to make this page more accessible by including the link on other related pages (e.g. Asthma Center website, Sustainability at Montefiore website).

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

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

Score explanation: There are no educational resources related to climate change or planetary health available on Montefiore's [website](#).

<b>Section Total (8 out of 14)</b>	<b>8</b>
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*Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

## Support for Student-Led Planetary Health Initiatives

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

1. Does your <b>medical school</b> or your <b>institution</b> offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the <b>medical school</b> or <b>institution</b> <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The <b>medical school</b> or <b>institution</b> encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, <b>but</b> there is no student funding available and there is no requirement to participate.
0	No, <b>neither</b> the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.

*Score explanation: Albert Einstein College of Medicine does not offer opportunities or formal support for medical students interested in enacting a sustainability initiative or QI project.*

2. Does your <b>institution</b> offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The <b>institution</b> has a <b>specific</b> research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these <b>require student initiative</b> to seek these out and carry them out in their spare time.
0	There are <b>no opportunities</b> for students to engage in planetary health/sustainable healthcare research.

*Score explanation: Einstein offers a Global Health program to its students known as One Health, which is focused on interdisciplinary efforts in research, education, and clinical practice, to unify and achieve the best healthcare outcomes for people, animals, and the environment. Einstein also offers a Global Health Fellowship involving clinical research with Dr. H. Dean Hosgood, studying the associations between air pollution and several cancers as well as nonmalignant respiratory and cardiometabolic outcomes.*

3. Does the <b>medical school</b> have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical	
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school and/or contact of information of potential mentors.	
2	The <b>medical school</b> has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a <b>medical school</b> webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is <b>no medical-school</b> specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<p><i>Score explanation: Einstein does not have a webpage consolidating information related to planetary health/sustainable healthcare activities or contact information of potential mentors. However, the Einstein Sustainability Club is currently working with faculty to develop this resource.</i></p>	

4. Does your <b>medical school</b> have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
2	Yes, there is a student organization <b>with faculty support</b> at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it <b>lacks faculty support</b> .
0	No, there is <b>not</b> a student organization at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Score explanation: The Einstein Sustainability Club, supported by two faculty mentors, is affiliated with Medical Students for a Sustainable Future and has a mission to develop planetary health as an institutional priority with an emphasis on benefiting the patients of the local Bronx Community. Plant-based at Einstein is also a student-led and faculty-supported group with one of their aims being to share the environmental benefits of a plant-based diet.</i></p>	

5. Is there a student liaison representing sustainability interests who serves on a <b>medical school</b> or <b>institutional</b> decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.
<p><i>Score explanation: Einstein's WellMed program which promotes overall student wellbeing includes <a href="#">environmental wellness</a>. The program has a student representative that works with the Office of Student Affairs to organize and advertise events related to wellness, some of which focus on sustainability.</i></p>	

**6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)**

1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students)

*Score explanation: Einstein has a CSA program as well as a student garden for students and other community members to participate in. The Lifestyle Medicine Interest Group (LIME) held a film screening and panel for students to discuss the environmental and health co-benefits of a plant based diet. Einstein Sustainability Club recently partnered with a local organization, the Bronx River Alliance, which protects and restores the Bronx River. At the first volunteering event, Bronx River Alliance staff explained the local environmental challenges that have historically been problems at the Bronx River; including continued issues such as combined sewer overflow. They also provided resources through which students could advocate for change to better protect the river and its surrounding parks. In conjunction with the Global Health Center, the Einstein Sustainability Club organized an art installation on climate and health; students were able to submit art pieces they felt reflected different dimensions of planetary health. Both the Einstein Sustainability Club and other student-run groups, including the Beautiful Bronx Project and Food Justice and Medicine, lead student opportunities to volunteer and promote community resilience to anthropogenic environmental impacts. Finally, the Outdoors and Climbing Club leads activities including hiking and rock climbing for students.*

**Section Total (11 out of 15)**

**11**

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



# Campus Sustainability

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

1. Does your <b>medical school</b> and/or <b>institution</b> have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is <b>at least one designated staff member</b> for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but <b>no specific staff member</b> in charge of medical school and/or hospital sustainability.
1	There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee
0	There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability
<p><i>Score explanation: Einstein's Office of Energy and Sustainability is focused on reducing negative environmental impact on our community. There is currently one full-time employee in this position serving as the Director of Energy &amp; Sustainability.</i></p>	

2. How ambitious is your <b>institution/medical school</b> plan to reduce its own carbon footprint?	
5	The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2030</b>
3	The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2040</b>
1	The institution/medical school has a stated goal of carbon neutrality by <b>2040</b> but has <b>not created a plan</b> to reach that goal or the <b>plan is inadequate</b>
0	The institution/medical school does <b>not</b> meet any of the requirements listed above
<p><i>Score explanation: Einstein has not explicitly pledged to achieve carbon neutrality by 2040. Einstein's partner hospital, Montefiore, has pledged to participate in the NYC Mayor's Sustainability Challenge to reduce carbon emissions by 50% by 2025.</i></p>	

3. Do buildings/infrastructure used by the <b>medical school</b> for teaching (not including the hospital)	
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utilize renewable energy?	
3	Yes medical school buildings are <b>100%</b> powered by renewable energy
2	Medical school buildings source <b>&gt;80%</b> of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source <b>&gt;20%</b> of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <b>&lt;20%</b> of energy needs from off-site and/or on-site renewable energy.
<p><i>Score explanation: Einstein continues to source approximately 10% of its electricity from ReCharge New York Hydropower, referring to firm hydroelectric power from the Niagara Project and St. Lawrence Project.</i></p>	

4. Are sustainable building practices utilized for new and old buildings on the <u>medical school</u> campus, with design and construction of new buildings and remodeling of old buildings conforming to a published sustainability rating system or building code/guideline?	
3	Yes, sustainable building practices are utilized for new buildings on the medical school campus and the <b>majority</b> of old buildings <b>have been retrofitted</b> to be more sustainable.
2	Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have <b>not been retrofitted</b> .
1	Sustainable building practices are <b>inadequately or incompletely</b> implemented for new buildings.
0	Sustainability is <b>not considered</b> in the construction of new buildings.
<p><i>Score explanation: Since we have not built a new building in the past fifteen years, we are answering this question only as it applies to old buildings. Old buildings have not been retrofitted, though when adding major new equipment to older buildings, this must comply with NYC energy code.</i></p>	

5. Has the <u>medical school</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
2	Yes, the medical school has implemented strategies to encourage and provide <b>environmentally-friendly transportation options</b> such as safe active transport, public transport, or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented <b>some</b> strategies to provide environmentally-friendly transportation options, but the options are <b>unsatisfactorily</b> accessible or advertised.
0	The medical school has <b>not</b> implemented strategies to encourage and provide environmentally-friendly transportation options.

*Score explanation: A shuttle system transports students between campuses and to a nearby subway station. Einstein participates in 511NY Rideshare, a carpooling program. Bicycle racks are also located in multiple areas of campus, as well as overnight in the parking garage.*

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

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

*Score explanation: There are waste bins for trash and recycling throughout campus and in student housing, but no compost programs. However, multiple faculty members and students have expressed that recycling is relatively inaccessible and should be expanded.*

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

3	Yes, the medical school has <b>adequate</b> sustainability requirements for food and beverages, including meat-free days or no red-meat, and <b>is engaged</b> in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The medical school <b>is engaged</b> in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The medical school is <b>not</b> engaged in efforts to increase food and beverage sustainability.
0	There are <b>no</b> sustainability guidelines for food and beverages.

*Score explanation: To our knowledge, no such guidelines exist for making decisions about food or beverage selections.*

**8. Does the medical school or institution apply sustainability criteria when making decisions about supply procurement?**

3	Yes, the medical school has <b>adequate</b> sustainability requirements for supply procurement <b>and is engaged</b> in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The medical school is <b>engaged</b> in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The medical school is <b>not engaged</b> in efforts to increase sustainability of procurement.

0	There are <b>no</b> sustainability guidelines for supply procurement.
<p><i>Score explanation: The website for the <a href="#">Office of Energy and Sustainability</a> includes a Environmentally Preferable Procurement Policy, which explains that Procurement will make efforts to increase sustainability (e.g. by securing contracts with environmentally conscious suppliers and purchasing products/appliances with low environmental impact) when practical or feasible, but there are no requirements to do so.</i></p>	

<b>9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u>?</b>	
2	Every event hosted at the medical school <b>must</b> abide by sustainability criteria.
1	The medical school <b>strongly recommends or incentivizes</b> sustainability measures, but they are <b>not required</b> .
0	There are <b>no</b> sustainability guidelines for medical school events.
<p><i>Score explanation: To our knowledge, no sustainability guidelines exist for medical school events.</i></p>	

<b>10. Does your <u>medical school</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?</b>	
2	Yes, the medical school has <b>programs</b> and <b>initiatives</b> to assist with making lab spaces more environmentally sustainable.
1	There are <b>guidelines</b> on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are <b>no</b> efforts at the medical school to make lab spaces more sustainable.
<p><i>Score explanation: The website for the <a href="#">Office of Energy and Sustainability</a> includes a Environmentally Preferable Procurement Policy, suggesting that departments consider more environmentally sustainable products and equipment. However, to our knowledge, no programs or initiatives focus on making lab spaces more environmentally sustainable..</i></p>	

<b>11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?</b>	
4	The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives.
3	The institution is <b>entirely divested</b> from fossil fuels.
2	The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments.
1	The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organized advocacy</b> for divestment.

0	Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that.
<i>Score explanation: Einstein has investments with fossil-fuel companies. To our knowledge, there have been no efforts to change that.</i>	

<b>Section Total (10 out of 32)</b>	<b>10</b>
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*Are there additional sustainability resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

# Grading

## Section Overview

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

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

*\*Within each grade bracket, a score in the top 5% (\_5 to \_9%), receives a “+”, and a score in the bottom 5% (\_0- \_4%) receives a “-”. For example, a percentage score of 78% would be a B+.*

## Planetary Health Grades for the Albert Einstein College of Medicine

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

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(52/72) \times 100 = 72.22\%$	B
<b>Interdisciplinary Research (17.5%)</b>	$(4/17) \times 100 = 23.53\%$	D-
<b>Community Outreach and Advocacy (17.5%)</b>	$(8/14) \times 100 = 57.14\%$	C+
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(11/15) \times 100 = 73.33\%$	B
<b>Campus Sustainability (17.5%)</b>	$(10/32) \times 100 = 31.25\%$	D
<b>Institutional Grade</b>	$(72.22 \times 0.3 + 23.52 \times 0.175 + 57.14 \times 0.175 + 73.33 \times 0.175 + 31.25 \times 0.175) = 54.08\%$	C

# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which the Albert Einstein College of Medicine has participated in the Planetary Health Report Card initiative.

## Planetary Health Report Card Trends for Albert Einstein College of Medicine

