



Planetary Health Report Card (Medicine):

Università della Svizzera italiana
Faculty of Biomedical Science



2023-2024 Contributing Team:

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Summary of Findings

Overall	D
<u>Curriculum</u>	D
<ul style="list-style-type: none"> • Università della Svizzera Italiana (USI) does include PH in the curriculum but a considerable part of the content provided is covered in one lecture about environmental health. It lacks the integration of planetary health longitudinally. • Recommendations: One could think about adding one more specific lecture on planetary health in the module of public health or deepen planetary and sustainable health in lectures such as “choosing wisely”, “reproductive medicine”, “cardiovascular risk factors” amongst others to improve longitudinal integration. The implementation of more PH in the curriculum should be discussed in the Study Commission which is responsible for the content of the curriculum. 	
<u>Interdisciplinary Research</u>	C-
<ul style="list-style-type: none"> • USI offers different courses related to sustainability across different faculties. There is however no faculty, degree program, or interdisciplinary board addressing the current and upcoming challenges posed by global warming. This seems disproportionate considering the complexity and the consequences on the planet and human life/health. • Recommendations: USI and its young Faculty of Biomedical Science have the potential to significantly enhance their engagement with the critical domain of planetary health research. We encourage an active involvement in the various ongoing projects globally and within Switzerland, such as the Sustainable Health System initiated by SAMW and to join national or international planetary health organisations. Consider organising a Planetary Health conference to bring together interest groups and to anchor the importance of the topic in the university's profile. Reach out to universities excelling in interdisciplinary planetary health research to develop a plan for similar structures at USI ready for proposal and build robust connections. 	
<u>Community Outreach and Advocacy</u>	F+
<ul style="list-style-type: none"> • The Faculty of Biomedicine and its affiliated teaching hospitals (EOC) have minimal community outreach on planetary health. Occasional events touch on healthcare sustainability, with limited information available mainly on selected topics like pollution in pneumology or pregnancy. • Recommendations: There is a lot of room for improvement in this category, both on the faculty side and on the affiliated hospital's one. A simple and easily applicable measure is collaborations and joint awareness campaigns with established community organisations that promote planetary and environmental health. 	
<u>Support for Student-Led Initiatives</u>	D-
<ul style="list-style-type: none"> • So far there is no student group engaging in planetary health, nor is there information or support from an official site of the university to support such initiatives or to fund them. • Recommendations: USI could incentivize student projects on planetary health and offer a webpage with resources for promoting local health system sustainability, healthier lifestyles, and sustainable consumption. 	
<u>Campus Sustainability</u>	C
<ul style="list-style-type: none"> • USI is committed to sustainability, with renewable energy use and support for public transport, but they lack a carbon neutrality plan. • Recommendations: Develop a detailed plan for more efficient carbon emission reduction or achieving carbon neutrality, and incorporate vegan days in the cafeteria. 	

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 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 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 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 centred 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 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.
- **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 in 2022, 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

1.1. 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?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation: At USI there is no optional course that covers the topic of Sustainable Healthcare or Planetary Health.</i></p>	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: USI curriculum includes in the 2nd year of master the lecture of Hypothermia and Hyperthermia where we speak about heat shock and the treatment of it over 2 slides.</i></p>	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on	
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individual health and/or on healthcare systems?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: There is no lecture at USI where extreme weather events are a topic.</i>	

1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: In the curriculum of USI there is the lecture of Travel medicine in the 1st year of master where the lecturer talks briefly (one slide) about the epidemiology of Aedes albopictus which is related to climate change.</i>	

1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: The USI curriculum includes in the 2nd year of master the lecture Environment and Health which deepens the topic of air pollution and its effects in short- and long term health as well as its effects on the healthcare system.</i>	

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.

1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: The USI curriculum includes in the 2nd year of master the lecture Environment and Health where the effects of air pollution onto atherosclerosis is discussed on one slide.</i>	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: The USI curriculum includes in the 2nd year of master the lecture trauma- and stress related disorders where extreme weather events such as hurricanes are mentioned as a possible trauma that can lead to post-traumatic disorder.</i>	

1.8. 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 in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: As far as we know, there is no lecture in the USI curriculum that addresses this topic.</i>	

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: The curriculum of USI contains the lecture “Environment and Health” where the outsourcing of air pollution due to dirty diesel is discussed and where the global inequality regarding air pollution is mentioned.

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

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

Score explanation: There is no lecture at USI about this topic.

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)?

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

Score explanation: In the USI curriculum there is no lecture covering this topic.

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

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

Score explanation: The curriculum of USI contains the lecture “Environment and Health” where a study on Air Pollution and Lung & Heart Disease in Adults in Switzerland is shown and where we see that the surrounding community of the university is exposed to high degrees of air pollution compared to the rest of Switzerland.

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
3	Indigenous knowledge and value systems are integrated throughout the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.
0	This topic was not covered.
<i>Score explanation: This topic is not covered in the USI curriculum. In Switzerland there are no indigenous populations.</i>	

1.14. Does your <u>medical school</u> 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?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: The curriculum of USI contains the lecture "Environment and Health" where local differences in pollution (e.g next to main road etc) and their effects on airway disease is shown and in a group discussion the effect of air pollution and how to avoid it in economically weak countries is discussed.</i>	

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: This topic is not covered in the USI curriculum.</i>	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
3	This topic was explored in depth by the core curriculum
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: This topic is not covered in the USI curriculum.</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)	
2	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
2	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.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK.
1	Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated
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	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)
<i>Score explanation: The curriculum of USI contains the lecture "choosing wisely" where the effects on the health system and on the personal health of over-testing is discussed, but not the impact on the environment.</i>	

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

1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change
<i>Score explanation: This topic is not part of USI curriculum.</i>	

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.
<i>Score explanation: The curriculum of USI contains the practical teaching "Doctor-patient communication" where we learn to do history taking and which also includes social history and very briefly environmental exposure is covered. We were for example taught to ask questions regarding exposure to special chemicals or asbestosis.</i>	

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.
<i>Score explanation: There is an optional course in planning that covers sustainable health. There is our student group from the PHRC with our faculty mentor which tries to implement more PH in the curriculum.</i>	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) .

0	There is minimal/no education for sustainable healthcare.
<i>Score explanation: The curriculum of USI contains the lecture “Environment and Health” which includes most of the content that is taught concerning planetary health.</i>	

1.22. 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?	
1	Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
0	No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
<i>Score explanation: There is no staff member responsible for overseeing planetary health at USI.</i>	

Section Total (23 out of 72)	31.94%
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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 emphasised.*

2.1. 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 medical school who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation: The Institute of Public Health (IPH) is an inter-faculty institute at Università della Svizzera Italiana and its mission is to generate collective and conscious efforts for sustainable development of society through the harmonisation of economic growth with social inclusion and environmental protection (United Nations Sustainability Goals).</i> https://search.usi.ch/en/organisational-units/501/institute-of-public-health Two of their members are current faculty members and lecturers at the Medical school: Prof. Albanese and PD Dr. Fadda.</p>	

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
<p><i>Score explanation: USI has a program called “The World Challenges Program” which currently offers a structured exchange program at the bachelor’s level for business or management students. World challenges involve a variety of stakeholders and occur in the context of food waste, biodiversity,</i></p>	

ecology, climate change, migration, social exclusion, and gender discrimination. There are, however, no projects linked to the medical school yet. <https://worldchallengesblog.wordpress.com/> Above (2.1) introduced, the Department of Public Health is conducting some research on planetary health, although those researchers are not directly affiliated with the medical school.

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 medical school?

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

Score explanation: No project includes community members who are disproportionately impacted by the effects of climate health by the Faculty of Biomedical Science at USI.

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

3	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.
2	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.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.

*Score explanation: USI has made an effort to keep its website updated on the various campus projects, including SostA (<https://www.usi.ch/en/university/what-we-do/sustainability/sosta>) and House of Sustainability (<https://www.casasostenibilita.usi.ch/en>), but they have yet managed to fully centralise all resources related to research in health and environment such as courses, projects, and interest groups. They have released a sustainability and environmental impact report in 2020 that summarizes sustainability goals and current efforts (report available in Italian only): https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf?_gl=1*8bwage*_gcl_au*MTcwMDUxMDgxMS4xNzA1MjU2Mjgl*_ga*MTEzM DY2MjQ4NS4xNjk2NTI3ODcz*_ga_89Y0EEKVWP*MTcwNTI3MDk1NC41LjEuMTcwNTI3MTAINi4yMy4wLjY3MjE5Njg0MA..)*

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.
<p><i>Score explanation: The Faculty of Biomedical Science of Lugano has hosted, together with SWIMSA (Swiss Medical Student Association) the yearly conference of 2022 (SMSC) on the topic "consciousness". The student association successfully raised awareness on the topic of Planetary Health with the presentation "Consciousness on Climate Change" by Prof. Dr. med. Pietro Majno-Hurst. https://www.usi.ch/en/feeds/20072</i></p>	

2.6. Is your medical school a member of a national or international planetary health or ESH organisation?	
1	Yes, the medical school is a member of a national or international planetary health or ESH organisation
0	No, the medical school is not a member of such an organisation
<p><i>Score explanation: Università della Svizzera Italiana is not a member of a national or international planetary health organisation (e.g., Planetary Health Alliance, Global Consortium on Climate and Health Education)</i></p>	

Section Total (7 out of 17)	41.18%
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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 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 medical school partner with community organisations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organisations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organisation to promote planetary and environmental health.
1	The institution partners with community organisations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
Score explanation: the faculty of biomedical sciences does not have any meaningful partnership with community organisations dedicated to promoting environmental and planetary health.	

3.2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The institution/medical school have not offered such community-facing courses or events.
Score explanation: the faculty of biomedical sciences occasionally offers open events that touch on the topic of health system sustainability (https://www.biomed.usi.ch/en/feeds/9798).	

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

2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not receive communications about planetary health or sustainable healthcare.
<i>Score explanation: the faculty does not provide regular communications regarding these topics.</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?	
2	Yes, the institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health.
1	Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are no such accessible courses for post-graduate providers
<i>Score explanation: although the topics are touched upon here and there at the lecturer's discretion, neither the faculty nor the affiliated teaching hospital (EOC) offer easily accessible and recurring courses as part of continuing medical education.</i>	

3.5. Does your <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?	
2	Yes, the medical school or all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centres have accessible educational materials for patients.
<i>Score explanation: the affiliated teaching hospital (EOC) does not have any comprehensive site tying environmental exposures to disease. There are informative and preventive brochures in printed form, aimed at specific topics such as pollution (pneumology), pregnancy, occupational risks, etc.</i>	

3.6. Does your <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?	
2	Yes, the medical school or all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.

0	No affiliated hospitals have accessible educational materials for patients.
<i>Score explanation: the affiliated teaching hospital (EOC) at the current time does not have accessible educational materials for patients.</i>	

Section Total (2 out of 14)	14.29%
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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.

4.1. Does your <u>medical school</u> or your <u>institution</u> offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the medical school or institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school or 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.
0	No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.
<i>Score explanation: We can freely launch our own projects and they might get some money from our student organisation but they are not encouraged by the university or the medical faculty.</i>	

4.2. Does your <u>institution</u> offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time.
0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<i>Score explanation: We can freely choose the topic of our masters thesis. There one could do some research on planetary health.</i>	

4.3. Does the <u>medical school</u> have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
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2	The medical school has a web page with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<i>Score explanation: As far as we know there are no webpages on planetary health.</i>	

4.4. Does your <u>medical school</u> 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 organisation with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support .
0	No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare.
<i>Score explanation: The closest thing to a student group dedicated towards planetary health is this group filling out the planetary health report card.</i>	

4.5. Is there a student liaison representing sustainability interests who serves on a <u>medical school</u> or <u>institutional</u> 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.
<i>Score explanation: As far as we know there are no student representatives.</i>	

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)	
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 organise hiking, backpacking, kayaking, or other outings for students)
<p><i>Score explanation:</i> There is a semester course on sustainable management in the faculty of economic sciences (https://search.usi.ch/it/corsi/35265761/sustainable-management) which students take during their second year of their master. There is another semester course on sustainable finance and ethics in the faculty of communication, culture and society (https://search.usi.ch/it/corsi/35265874/sustainable-finance-and-ethics) which students can take during their first and second year in the master. The university organises several hikes, trail runs, bike tours and similar activities per year. (https://sport.usi.ch/en/outdoor-calendar)</p>	

Section Total (3 out of 15)	20.00%
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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 endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.*

5.1. Does your <u>medical school</u> and/or <u>institution</u> have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff , but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation: There is a task force with multiple members, but only some are working on it full-time, the others have another job as well.</i></p> <p><i>Information on the members can be found here:</i></p> <p>https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf - page 7</p>	

5.2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint?	
5	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030
3	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040
1	The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate
0	The institution/medical school does not meet any of the requirements listed above
<p><i>Score explanation: The faculty has stated that they want to reduce their carbon footprint by 10% until the end of 2024. They do not have a plan for carbon neutrality.</i></p>	

Information on the topic can be found here:
https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf - page 40

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

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

Score explanation: Our institution is powered mainly by methane gas. However several buildings installed Minergie which is a combination of sustainable energy source usage like heat pumps and a good isolation of the buildings.

Information on the topic can be found here:

https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf - page 30/31

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

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

Score explanation: Several buildings installed Minergie which is a combination of sustainable energy source usage like heat pumps and a good isolation of the buildings. Some buildings however are under preservation order which makes a renovation complicated.

Information on the topic can be found here:

https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf - page 30/31

5.5. Has the medical school or institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental

impact of commuting?	
2	Yes, the medical school or 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.
1	The medical school or institution has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school or institution has not implemented strategies to encourage and provide environmentally-friendly transportation options.
<p><i>Score explanation: Our university provides bike and car sharing possibilities. They also adapted their schedule of lectures to the arrival of public transports to make commuting with them easier.</i></p> <p><i>Information on the topic can be found here:</i></p> <p>https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf - page 35</p>	

5.6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass) ?	
2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.
<p><i>Score explanation: The students have access to recycling bins for glass, paper, aluminium, PET and trash, not to compost.</i></p> <p><i>Information on the topic can be found here:</i></p> <p>https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf - page 19</p>	

5.7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
3	Yes, the medical school has adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is not engaged in efforts to increase food and beverage sustainability.

0	There are no sustainability guidelines for food and beverages.
<p><i>Score explanation: There are guidelines for the food and beverage such as to use local products, a program to throw them away once they are expired but to give them away for a cheaper price, also they have one meat-free day per week and always a vegetarian meal. However, the medical faculty is not much involved in that process, but our medical faculty is also very small.</i></p> <p><i>Information on the topic can be found here:</i> https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf - page 27/28</p>	

5.8. Does the <u>medical school</u> or <u>institution</u> apply sustainability criteria when making decisions about supply procurement?	
3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.
<p><i>Score explanation: There are guidelines for the food and beverage such as to use local products, a program to throw them away once they are expired but to give them away for a cheaper price, also they have one meat-free day per week and always a vegetarian meal. However, the medical faculty is not much involved in that process, but our medical faculty is also very small.</i></p> <p><i>Information on the topic can be found here:</i> https://content.usi.ch/sites/default/files/storage/attachments/qualita/qualita-rapporto_sostenibilita_impatto_ambientale.pdf - page 27/28</p>	

5.9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u> ?	
2	Every event hosted at the medical school must abide by sustainability criteria.
1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required .
0	There are no sustainability guidelines for medical school events.
<p><i>Score explanation: The faculty and the University are sensitive to decrease their environmental impact, however when events are organised or hosted no sustainability measures are advised.</i></p>	

5.10. Does your <u>medical school</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.

1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.
<i>Score explanation: The sustainability is ranked quite high in USI-affiliated labs according to the information of Pietro Majno-Hurst.</i>	

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	The institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<i>Score explanation: USI does not have any endowment portfolio investments, or any investments whatsoever. So, there are no investments in fossil fuel. Nevertheless, most of the energy we use in our buildings comes, unfortunately yet, from fossil fuels, depending on the portfolio of our energy general provider (AIL). In 2022 64.94% of AILs provided energy came from renewable resources like water power and solar energy but still 35.06% came from non-renewable sources like nuclear energy. Fossil fuels like natural gas however only make up for 0.08% of all the energy AIL provides.</i>	

Section Total (16 out of 32)	50.00%
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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%

Planetary Health Grades for the Università della Svizzera Italiana School of Medicine

The following table presents the individual section grades and overall institutional grade for the Università della Svizzera Italiana 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%)	$(7/17) \times 100 = 41.18\%$	C-
Community Outreach and Advocacy (17.5%)	$(2/14) \times 100 = 14.29\%$	F+
Support for Student-led Planetary Health Initiatives (17.5%)	$(3/15) \times 100 = 20.00\%$	D-
Campus Sustainability (17.5%)	$(16/32) \times 100 = 50.00\%$	C
Institutional Grade	$(34 \times 0.3 + 41 \times 0.175 + 14 \times 0.175 + 20 \times 0.175 + 50 \times 0.175) = 31.54\%$	D