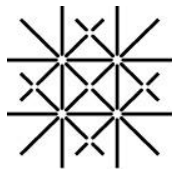




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# Planetary Health Report Card (Medicine): *University of Basel*

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Universität  
Basel



2023-2024 Contributing Team:

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## Summary of Findings

|  |    |
|--|----|
| Overall  | B- |
| <u>Curriculum</u>  | B+ |
| <ul style="list-style-type: none"> <li>The Medical Faculty (MFac) of the University of Basel (UniBas) is well on track implementing Planetary Health (PH) topics into existing lectures and developing new formats. Some topics are still missing in the core curriculum. Three elective courses on PH are continuously offered for master students.</li> <li><b>Recommendations:</b> Strategies for communication with patients about the effects of environmental crises and taking an environmental/exposure history should be integrated in the core curriculum as well as respiratory and cardiovascular health effects of environmental toxins, the issue of pharmacodynamics and the importance of Indigenous knowledge. Elective courses for bachelor students would be valuable.</li> </ul> |    |
| <u>Interdisciplinary Research</u>  | C  |
| <ul style="list-style-type: none"> <li>The Sustainable Future Research Network at the UniBas coordinates interdisciplinary research in the field of sustainability. However, PH is not a designated research field yet. The Swiss TPH conducts research in several topics related to PH.</li> <li><b>Recommendations:</b> The MFac should facilitate transdisciplinary research projects on PH and offer master/doctoral thesis on the topic. The MFac should continue hosting yearly events (e.g. conference or symposium) related to PH in collaboration with other Swiss faculties, affiliated hospitals or organisations.</li> </ul>   |    |
| <u>Community Outreach and Advocacy</u>   | B- |
| <ul style="list-style-type: none"> <li>The MFac is a member of the Planetary Health Alliance Europe Hub and the GCCHE, and partnered temporarily with local organisations. In 2023, the MFac organised an event on Planetary Health open to the community and intends to offer yearly events for a community audience.</li> <li><b>Recommendations:</b> The MFac should continue offering events together with local organisations, students and teachers in order to involve the local community. PH should be covered regularly in newsletters and on the websites. Educational material for patients and/or hospital employees should be developed.</li> </ul>  |    |
| <u>Support for Student-Led Initiatives</u>   | B  |
| <ul style="list-style-type: none"> <li>The student organisation <i>Health for Future Basel</i> is dedicated to PH and works with faculty members. The UniBas wants to increasingly integrate sustainability-related topics into teaching and offers a funding program to integrate sustainability topics into courses.</li> <li><b>Recommendations:</b> The MFac should increase support to students interested in sustainable initiatives by creating and updating content on PH and ESH on its website. The student representatives that serve on decision-making committees of the MFac should be assigned to represent PH topics. Students should be supported in working together with other sustainability related groups and initiatives at the UniBas.</li> </ul>                            |    |
| <u>Campus Sustainability</u>   | C+ |
| <ul style="list-style-type: none"> <li>Sustainability is anchored in the Unibas' Strategy 2022-2030 and Mission Statement. The Sustainability Office coordinates several projects and developed a strategy to reduce GHG emissions until 2030. Both the MFac as well as the University Hospital of Basel source about 70 % renewable energy. Sustainable building practices are implemented in every new building, university wide.</li> <li><b>Recommendations:</b> A systematic review regarding the integration of sustainability criteria for procurement is still pending and the MFac should engage in these efforts as well. Further measures to incentivise sustainable mobility should be implemented as well as measures to retrofit existing buildings.</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 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 <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.                                   |
| <p><i>Score explanation: The Faculty of Medicine at the University of Basel offers three elective projects for Master's students per year: "Planetary Health - what can doctors contribute to tackle ecological crises?" (Winter School), "Green Hospital: Sustainability in Healthcare" (Winter School) and "Nutrition and Medicine" (Summer School). Further elective projects for Bachelor students are planned for the coming years.</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 <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: The relationship between the climate crisis, heat waves and the effects on health are introduced in the lecture "Introduction to Planetary Health" in the introductory block in the 1st BA study year. Additionally, the topic is covered in depth in the lecture "Climate change and health" in the</i></p> |  |

1st BA year (thematic block “Body/Subject/Environment”) as well as in the 3rd BA year (thematic block “Healthy-sick-tumor”) in the new seminar “Planetary Health”.  
In other thematic blocks, the relationship of heat and different disease patterns is established, e.g. in geriatrics and psychiatry.

**1.3. 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: The effects of extreme weather events on the health of individuals and on health systems are briefly addressed in the lecture "Introduction to Planetary Health" in the introductory block in the 1st BA study year. Since the autumn semester 2023, the topic is also covered in more detail in the 3rd BA year (thematic block “Healthy-sick-tumor”) in the seminar “Planetary Health”. The impact of floods and heat waves are mentioned, whereas the impacts of droughts and wildfires are discussed in detail.*

*The relationship between extreme weather events and psychological effects is covered in the 2nd BA year (thematic block “Psyche/Ethics/Law”) in a lecture called “Psyche and climate crises”.*

**1.4. 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: The impact of climate change on patterns of infectious diseases is mentioned in the lecture "Introduction to Planetary Health" and in ecology lectures in the introductory block in the 1st BA study year. Additionally, the impact of climate change on infectious diseases is addressed in the lecture “Environment and health” in the 1st BA year (thematic block “Body/Subject/Environment”) in the seminar “Planetary Health” in the 3rd BA year (thematic block “Healthy-sick-tumor”), as well as in the lecture “Tick-borne infections (and important infections transmitted from animals to humans)” in the 1st MA year (thematic block “Blood/Infections/Immune system”),*

**1.5. 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.                                   |
| <p><i>Score explanation: Respiratory health effects of climate change and air pollution are introduced in the lecture "Introduction to Planetary Health" in the introductory block in the 1st BA study year. In the 1st MA year, environmental exposure-related COPD is mentioned in a lecture in the thematic block "Respiration". Additionally, the elective course "Planetary Health" for Master's students covers the topic.</i></p> |  |

|   |  |
|---|--|
| <b>1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?</b>   |  |
| 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: The effect of climate change on the development of cardiovascular diseases is covered in the 1st MA year (thematic block "Cardiovascular system"), where the link to Planetary Health is made with the example of cigarette smoking (negative effects on cardiovascular health as well as on the environment, contributing to climate change). The effect of increased heat on cardiovascular health is mentioned in the lecture "Climate change and heat related mortality" in the 1st BA year (thematic block "Body/Subject/Environment") as well as in the seminar "Planetary Health" in the 3rd BA year (thematic block "Healthy-sick-tumor"). The lecture "Environment and health" (thematic block "Body/Subject/Environment") covers the effect of noise pollution (e.g. traffic or night-time aircraft noise) on cardiovascular health. The link to air pollution is still missing.</i></p> |  |

|   |  |
|---|--|
| <b>1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?</b>  |  |
| 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: Since spring semester of 2023, the effects on mental health are covered in detail in the 2nd year of the Bachelor's program in a new lecture in the thematic block "Psyche/Ethics/Law" called "Climate crises and psyche".</i></p> |  |



**1.8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?**

|   |  |
|---|--|
| 3 | This topic was explored <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 relationships between ecosystem health, climate crisis, further planetary boundaries and health are established in the introductory block in the 1st BA year in the segment "General Biology" in several ecology lectures. In the 2nd BA year (thematic block "Digestive system"), issues of food production, food security, sustainability and health are covered in the lecture "Food and Sustainability". Furthermore, in the 3rd BA year (thematic block "Healthy-sick-tumor") students discuss the topics of food security, conflict and migration as well as health effects in the seminar "Planetary Health" in greater detail.*

*The relationship between hospital food and sustainability is further established in the seminar "Sustainability in the healthcare system" (thematic block Public Health) in the 2nd year of the Master's program as well as in the elective course "Green Hospital: Sustainability in Healthcare".*

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

|   |  |
|---|--|
| 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: Issues of social and intergenerational justice are brought up in the lecture "Introduction to Planetary Health" in the introductory block of the first BA year. Additionally, different dimensions and health effects of social inequity are covered in detail in the lecture "Social inequalities and health" in the 1st BA year (thematic block "Body/Subject/Environment").*

*In the seminar "Planetary Health" in the 3rd BA year (thematic block "Healthy-sick-tumor"), it is highlighted that some populations are more vulnerable to climate health effects (e.g. elderly people, children, pregnant women, people with pre-existing chron. diseases, people from low-and middle income countries, outdoor working people).*

*Lectures in the 3rd BA year (thematic block "Life cycles") address health impacts of climate effects on elderly people (global warming leading to an increase in frailty, dehydration, falls and heat-related mortality). The lecture "Gender, health and migration" in the 1st BA year (thematic block "Body/Subject/Environment") discusses mortality and health of migrants in relation to gender effects. These are however only occasionally put in context of the current climate crisis and its effects.*

**1.10. 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.                                     |
| <p><i>Score explanation: The lecture "Introduction to Planetary Health" in the first BA year (introductory block) addresses the vulnerability of certain regions to climate-sensitive health threats compared to the global distribution of carbon emissions and carbon footprints. The climate vulnerability of regions with different income levels in relation to their healthcare carbon footprints are presented as well. Among others, the lectures "Environment and health" and "Climate change and health" in the 1st BA year (thematic block "Body/Subject/Environment") briefly point out different regional health impacts of climate change (e.g. disproportionate impact on low- and middle income countries). On the theme day "Healthy and sick in the context of living environment, cultures, migration and gender" in the 3rd BA year (thematic block "Healthy-sick-tumor"), several lectures discuss climate change-related displacement and health of migrants. Lectures in the 2nd MA year (thematic block "Reproduction") address regional differences concerning maternal mortality risk and preterm birth ("Reproductive and sexual health - Epidemiological data, migration" and "Premature birth"). There, the link to climate change could be made even more explicitly.</i></p> |  |

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

| <b>1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?</b>   |  |
|--|--|
| 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: Effects on reproductive health, e.g. due to pollution from wildfires and raw material mining, are addressed briefly in the seminar "Planetary Health" (3rd BA year, thematic block "Healthy-sick-tumor").</i></p> |  |

| <b>1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?</b> |  |
|---|--|
| 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: A lecture in the introductory block in the 1st BA year in the segment "General Biology" deals with examples of anthropogenic environmental threats that are relevant to the Basel region (e.g. biodiversity loss). The lecture "Climate change and health" (1st BA year; thematic block "Body/Subject/Environment") covers local environmental health threats in detail: Rising temperatures and heat-related mortality, the spread of disease vectors (introduction of the Asian tiger mosquito, increase in tick-borne meningoencephalitis cases) as well as changes in pollen production and allergens (earlier, longer and more intense pollen season). The lecture "Environment and health" in the same thematic block additionally covers health effects of radon, electromagnetic fields and noise.*

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

|   |  |
|---|--|
| 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: To our knowledge, this topic is not yet included in the curriculum nor part of elective courses.*

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

|   |  |
|---|--|
| 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 seminar "Planetary Health" in the 3rd BA year (thematic block "Healthy-sick-tumor"), addresses the impact of environmental toxins on vulnerable populations such as elderly people, children, pregnant women, people with pre-existing chronic diseases, people from low-and middle income countries and outdoor working people. The issue of gendered health impacts of environmental toxins is illustrated using the example of raw material extraction.*

**1.15. 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 covered in detail in a lecture called "Food and Sustainability" in the 2nd BA year (thematic block "Digestive system"). Additionally, the Planetary health diet is mentioned in the lecture "Introduction to nutrition" (2nd BA year, thematic block "Digestive system") as well as in the 3rd BA year in lectures on geriatrics in the thematic block "Life cycles".*

*Furthermore, there is an elective project offered to Master's students on the topic of nutrition (Summer School) which deals with the ecological and health benefits of a plant-based diet.*

**1.16. Does your medical school 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.                                    |

*Score explanation: The carbon footprint of the healthcare system is covered in depth in the new seminar "Sustainability in the healthcare system" in the 2nd MA year (seminar Public health, three teaching units).*

*For Master's students, an elective project "Green Hospital: Sustainability in Healthcare" is additionally offered together with the University Hospital Basel (Winter School). It's designed to give students an insight into the environmental aspects of everyday clinical hospital life during tours of particularly sensitive hospital areas such as the operating theatre/anaesthetics, sterilisation, waste and wastewater management, procurement, energy management and shows how the healthcare system can be made more sustainable.*

**1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core 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 fulfil this metric. |

|   |   |
|---|---|
| 1 | The health <b>and</b> environmental <b>co-benefits of 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'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 <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:</i></p> <ol style="list-style-type: none"> <li><i>1. The co-benefits of avoiding over-medicalisation and over-treatment are covered in the 1st BA year (introductory block) in the field "Everyday medical practice" as well as in the 2nd MA year (Public Health seminar) in the seminar "Sustainability in the healthcare system".</i></li> <li><i>2. The issue of pharmaceuticals detected in groundwater and treated wastewater is addressed in the lecture "Introduction to Planetary Health" in the introductory block in the 1st BA study year. The CO2 footprint of pharmaceuticals as well as medical actions to promote sustainable drug prescribing and reduce the discard of pharmaceuticals are covered in the 2nd MA year (Public Health seminar) in the seminar "Sustainability in the healthcare system".</i></li> <li><i>3. To our knowledge, the topic of social prescribing is not yet covered explicitly.</i></li> <li><i>4. Resource consumption and waste of surgical healthcare is only briefly addressed in the lecture "Introduction to Planetary Health" in the introductory block in the 1st BA study year by showing a video.</i></li> <li><i>5. The global warming potential of anaesthetic gases is addressed in the 2nd MA year (Public Health seminar) in the seminar "Sustainability in the healthcare system". Abolishing N2O and desflurane in anaesthesia is mentioned as a measure to reduce the GHG footprint.</i></li> <li><i>6. The impact of classic inhalers on the healthcare carbon footprint and the substitutability by powder inhalers with less environmental impact is only briefly addressed in the seminar "Sustainability in the healthcare system" in the 2nd MA year. The topic should be covered in the thematic block respiration as well.</i></li> <li><i>7. Waste production and strategies to reduce waste in clinical activities are covered in the 2nd MA year (Public Health seminar) in the seminar "Sustainability in the healthcare system" as well as in the elective course "Green Hospital - Sustainability in Healthcare" for MA students.</i></li> </ol> |

### **Curriculum: Clinical Applications**

**1.18. In training for patient encounters, does your medical school's curriculum introduce strategies to have conversations with patients about the health effects of climate change?**

|   |   |
|---|---|
| 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: To our knowledge, strategies for communicating information on health effects of the climate crisis have not yet been introduced in the core curriculum. In future study years, strategies for communicating health co-benefits (active mobility, contact with nature, renewable energies) will be addressed.</i></p> |   |

| <b>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?</b>   |  |
|---|--|
| 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: Strategies for taking an environmental or exposure history are introduced to some extent (e.g. in work, travel and social anamnesis) in a BA course on conversational skills, however, it could be further expanded to include more environmental factors.</i></p> |  |

***Curriculum: Administrative Support for Planetary Health***

| <b>1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?</b>  |  |
|--|--|
| 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: At the MFac of the University Basel, a curriculum for "Planetary Health and Sustainability in Health Care" was designed and approved by the curriculum committee. It serves as a basis for the long-term, longitudinal implementation of Planetary Health and Sustainable Healthcare education. The implementation began in the autumn semester 2022 and is still ongoing. It is coordinated, constantly evaluated and improved by a staff member of the student deanery in collaboration with experts.</i></p> |  |

| <b>1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare</b> |
|--|
|--|

| topics integrated longitudinally into the <u>core</u> curriculum?  |  |
|--|--|
| 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: At the MFac of the University Basel, as of January 2024, several Planetary health and Sustainable healthcare topics are integrated longitudinally into the core curriculum of the BA and MA program. In view of the dense curriculum, most of the content is integrated into already existing courses, while there are some entirely new lectures and seminars. This helps to deepen the knowledge and create an understanding of the diverse links between environmental changes and health and the complex interactions. Counting in the autumn semester of 2023, content on Planetary Health and Sustainable healthcare is integrated in an introductory lecture as well as in the subject areas of ecology, medical practice, public health, psychiatry, dermatology, gastroenterology, nephrology, cardiology and geriatrics.</i></p> <p><i>For the upcoming semesters, Planetary health topics are also planned to be integrated in lectures on ethics, endocrinology, pneumology, paediatrics, reproductive health, pharmacotherapy and prevention (see <a href="#">Curriculum online</a>).</i></p> <p><i>In the future, the MFac could endorse the creation of a professorship for PH in collaboration with the university and associated institutes and review the implementation of pre-existing and accredited online courses on Planetary Health (e.g. <a href="#">Planetary Health Academy, by KLUG</a>) for ECTS acquisition.</i></p> |  |

| 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   | <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: The MFac employs a part-time staff member to oversee and evaluate the integration of Planetary Health into teaching.</i></p>   |  |

|                              |     |
|------------------------------|-----|
| Section Total (56 out of 72) | 78% |
|------------------------------|-----|

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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.*

| <b>2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u>?</b>   |   |
|--|---|
| 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: The Swiss Tropical and Public Health Institute (<a href="#">SwissTPH</a>) is an institutional partner of the University of Basel and is in charge of the Public Health curriculum at the medical faculty. They conduct research in various fields of planetary health such as climate change, declining biodiversity, extreme temperatures, vector-borne diseases as well as extensive exposome research. Also, there is a research Unit at SwissTPH that conducts transdisciplinary OneHealth research with a focus on the intersection of human and animal health (mainly communicable diseases).</i></p> |   |

| <b>2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?</b>  |  |
|---|--|
| 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.  |
| <p><i>Score explanation: The University of Basel's <a href="#">Sustainable Future research network</a> serves to coordinate and strengthen interdisciplinary research in the field of sustainability at the University of Basel across departmental and faculty boundaries. At the medical faculty there is the Department of Public Health</i></p> |  |



which is linked to various institutes and focuses on (human) public health. Furthermore, the Swiss Tropical and Public Health Institute is an institutional partner of the University of Basel and covers different aspects of environmental health and planetary health research. Planetary Health is not yet a designated research area in any of these networks / institutes.

**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 <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 are currently no known efforts to create such a process at the medical faculty in Basel. The Swiss Tropical and Public Health Institute, which is an institutional partner of the University of Basel, conducts transdisciplinary research in various fields (e.g. OneHealth) but to our current knowledge there is no transdisciplinary research about climate change or environmental injustice. The [Medical anthropological research](#) at the Institute of Social Anthropology at the University of Basel focuses on health and well-being at global, national, and local levels, with a critical eye on health inequalities in diverse political, economic, and environmental contexts. There is potential in various research institutes associated with the medical faculty/institution to create such a process around the topic of climate change and environmental injustice.*

**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 <b>easy-to-use, adequately comprehensive</b> website that <b>centralises</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 centralise</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: The Sustainability Office of the University of Basel has a [website](#) with information on events and resources on sustainability in general. Specific resources on the topic of planetary health are not (yet) available. The MFac updates news on their [website](#) which sometimes include Planetary Health topics. On the website of the Swiss Tropical and Public Health institute ([SwissTPH](#)) various*

research projects that are related to health and the environment are presented among the different fields of research of the institute.

**2.5. 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.                        |

*Score explanation: The Medical Faculty organised an event in September 2023 on sustainable and health-promoting food together with a team of other organisations in the field (Ebenrain, Ernährungsforum Basel, Innovation Office University of Basel and Crowd Container). Several experts gave a short educational presentation and discussed the topic among each other and with the audience. The event was public and specifically created to speak to the general public as well as to university members (students and employees). It reached a big local audience of over 100 people.*

*Furthermore two events were organised or carried out at affiliated teaching hospitals about topics related to planetary health:*

*1) In October 2023 the University Hospital of Basel hosted the [annual event](#) of the federal "Energy & Climate" project which this year focused mainly on the health sector and commitments of healthcare facilities to reach carbon neutrality.*

*2) In September the University Children's Hospital Basel hosted a [minisymposium](#) about climate change and children's health covering topics like the health effects of heat/extreme temperatures, changes in communicable diseases due to climate change and psychological effects of the climate crisis on young people.*

**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 <b>not</b> a member of such an organisation                                   |

*Score explanation: The MFac at the University of Basel is a member of the Planetary Health Alliance European Hub and the Global Consortium on Climate and Health Education. The affiliated University Hospital Basel is part of the network [Global Green and Healthy Hospitals](#).*

|                             |     |
|-----------------------------|-----|
| Section Total (8 out of 17) | 47% |
|-----------------------------|-----|

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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 <b>medical school</b> partner with community organisations to promote planetary and environmental health?  |  |
|---|--|
| 3   | Yes, the <b>medical school</b> meaningfully partners with <b>multiple</b> community organisations to promote planetary and environmental health. |
| 2   | Yes, the <b>medical school</b> meaningfully partners with <b>one</b> community organisation to promote planetary and environmental health.       |
| 1   | The <b>institution</b> partners with community organisations, 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:</i> In 2023, the Medical Faculty partnered with the local Center for Agriculture, Nature and Nutrition (Ebenrain) and the Forum for Nutrition Basel (Ernährungsforum) in order to organise a public event on Planetary health and food. The University has different partnerships (see <a href="#">dialogue</a> &amp; <a href="#">research</a>).</p> |  |

| 3.2. 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.   |
| <p><i>Score explanation:</i> The Medical Faculty organised an event in September 2023 on sustainable and health-promoting food together with a team of other organisations in the field (Ebenrain, Ernährungsforum Basel, Innovation Office University of Basel and Crowd Container). Several experts gave a short educational presentation and discussed the topic among each other and with the audience. The event was public and specifically created to speak to the general public as well as to university members (students and employees). It reached a big local audience of over 100 people.</p> |   |

In December 2023, the Medical Faculty collaborated with the University Hospital to create a small exhibition of posters on Planetary Health and Health-Co-Benefits during 3 weeks for students at a highly frequented school building.  
The Medical Faculty plans to organise events open for a community audience yearly. (Online) courses for a community audience are not planned.

**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 <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: The Sustainability Office of the University as well as the University communications team send out regular [newsletters](#) which sometimes include topics related to Planetary Health. The Faculty of Medicine updates news on their [website](#) which sometimes include Planetary Health topics as well. The Faculty does not send out regular information updates in general.

**3.4. 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: The advanced training program DAS (Diploma of Advanced Studies) on [Public Health](#) contains a course on Planetary Health. The University Hospital Basel does not offer specific courses on planetary health. However, the topic is picked up in short facultative courses (e.g. within a series of leadership courses).

Furthermore, the affiliated institution FHNW (Fachhochschule Nordwestschweiz) [University of Applied Sciences and Arts Northwestern Switzerland] offers a [CAS \(Certificate of Advanced Studies\) on Health and Environment](#).

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

|   |   |
|---|---|
| 2   | Yes, the <b>medical school</b> or <b>all affiliated hospitals</b> have accessible educational materials for patients. |
| 1   | <b>Some</b> affiliated hospitals have accessible educational materials for patients.                                  |
| 0   | <b>No</b> affiliated medical centres have accessible educational materials for patients.                              |
| <p><i>Score explanation: The University Hospital Basel does not offer educational material for patients about environmental health exposures. Individual doctors do offer educational material provided by different doctors' associations (FMH, vsao, KLUG, etc.).</i></p> |   |

| 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 <b>medical school</b> or <b>all affiliated hospitals</b> 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.                                    |
| <p><i>Score explanation: The University Hospital Basel does not offer educational material for patients about environmental health exposures. Individual doctors do offer educational material provided by different doctors' associations (<a href="#">FMH</a>, <a href="#">vsao</a>, <a href="#">KLUG</a>, etc.).</i></p> |   |

|                                    |            |
|------------------------------------|------------|
| <b>Section Total (7 out of 14)</b> | <b>50%</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.*

| 4.1. 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 fulfil 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: There is no specific funding programme by the Faculty of Medicine for the area of sustainability. However, the local section of the student organisation "Health for Future" at the MFac dedicated to Planetary Health has the possibility to be financially supported for different projects by the National Medical Students' Organisation (swimsa) or the Medical Students' Association Basel (FaMBa). Additionally, the University of Basel's [Impulse funding programme](#) supports lecturers and students from all disciplines in integrating sustainability topics into their courses. They do support for example the professorships "Public Health" and "Health Economics". The elective projects of the Medical Faculty, "Green Hospital: Sustainability in Healthcare", "Planetary Health" and "Sustainable Nutrition and Medicine" were supported as well.*

| 4.2. 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: There are research opportunities for students, e.g. within the framework of the Master's or doctorate thesis and through their own initiative, for example at the Department of Public Health at the MFac or at the associated institute SwissTPH.. There are no specifically Planetary Health or Sustainable Healthcare addressing, institutionalised research programs yet.*



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

|   |  |
|---|--|
| 2 | The <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.  |

*Score explanation: The Faculty of Medicine has a [website](#) that introduces the longitudinal curriculum on Planetary Health and Sustainability in Healthcare and provides further information. Continuously updated information on Planetary Health, initiatives, events and mentors is lacking still. The university's [website](#) and newsletter sporadically present PH-related content online. Students at the Medical Faculty will find further information about Health4Future on the [students' association website](#).*

**4.4. Does your medical school have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?**

|   |   |
|---|---|
| 2 | Yes, there is a student organisation <b>with faculty support</b> 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 <b>lacks faculty support</b> . |
| 0 | No, there is <b>not</b> a student organisation at my institution dedicated to planetary health or sustainability in healthcare.                               |

*Score explanation: There is a local section of the national "Health for Future Switzerland" association which is active in Basel and at the medical school. Among other things, they co-organise elective courses for medical students and participate in the institution's sustainability week. "Health for Future Basel" also generally advocates for sustainability in healthcare and medical education. They collaborate with the project coordinator for sustainability at the medical school and its affiliated hospital, as well as with the institutions' office for sustainability. On a national level the swimsa (Swiss medical students' association) further promotes Planetary Health efforts by working with relevant stakeholders, mostly through the position of a "Liaison Officer for Planetary Health" (LO-PH) based on the [position paper about Planetary Health](#) and several other initiatives.*

**4.5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability**



| best practices?   |  |
|---|--|
| 1   | Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee. |
| 0   | No, there is no such student representative.   |
| <p><i>Score explanation: Students of the University Basel are represented at the leading group for climate neutrality and the sustainability council. This allows them to have strategic oversight over the university's engagement in sustainability. The medical school has student seats on some of its governing councils (faculty assembly, curriculum committee and appeals committee), thereby allowing for a student liaison to possibly represent sustainability interests. However, those existing possibilities do not suffice, as there is no current student representative for sustainability specifically at the MFac and the implementation of student representation should be deepened so that sustainability interests are represented more effectively and intentionally.</i></p> |  |

| 4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)   |   |
|--|---|
| 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: The university disposes of 3 student run gardens, serving as a place to meet, exchange interest in nature, and learn gardening and plantation from each other. The Sustainability Working Group (<a href="#">AG Nachhaltigkeit</a>) is a group of students at the University of Basel who plan projects and events in the area of sustainability. For example, the University hosts an annual sustainability week, including events around Planetary health. The sustainability office also organised a clean-up day, where students and university employees helped free the streets of littering. Lastly the university has numerous excursions, be it in the form of a sports offering, incorporated into a group project on human physiology in the mountains, or a research trip to study human impact on the environment.</i></p> |   |

|                                     |            |
|-------------------------------------|------------|
| <b>Section Total (10 out of 15)</b> | <b>67%</b> |
|-------------------------------------|------------|

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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 <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>Score explanation: The <a href="#">Sustainability Office</a> is responsible for the entire University of Basel. The <a href="#">University Hospital Basel</a> also has a sustainability office and the Faculty of Medicine employs a project coordinator for sustainability.</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 <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>Score explanation: The University of Basel has stated its goal to increase its sustainability, and publishes yearly reports of steps taken towards that goal. A concrete plan to reduce their carbon footprint by 35% compared to 2019 by 2030 has been established, and will be published in March. A further strategy to offset the remaining emissions is being evaluated. The University Hospital Basel publishes a yearly <a href="#">sustainability report</a> and defined concrete goals and measures for five fields of action.</p> |  |

**5.3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) 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. |

*Score explanation: The buildings used by the medical school for teaching are partly owned by the University and partly by the University Hospital. The University as well as the University Hospital source 100% of the electricity needs from renewable energy (hydropower). Additionally, photovoltaic systems have been installed on two buildings of the University. Heating is provided by a local district heating network which is ca. 50% renewable. This accounts to a total estimate of 65-70% of energy needs that are sourced from renewable energy.*

**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 <b>majority</b> of old buildings <b>have been retrofitted</b> to be more sustainable. |
| 2 | Sustainable building practices are utilised 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.   |

*Score explanation: The buildings used by the medical school for teaching are partly owned by the University and partly by the University Hospital. Both have strategies for sustainable, energy-optimised constructing of new buildings. Concerning existing buildings, only smaller measures are being taken (e.g. replacement of lamps with LED). Any new building is required to meet SGNI Gold or Platin standards. Currently a new building for the department of biomedical engineering is being built but will not meet these standards, the plan having been approved previous to the adoption of the SGNI gold requirement.*

**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 <b>environmentally-friendly transportation options</b> 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 <b>some</b> strategies to provide environmentally-friendly transportation options, but the options are <b>unsatisfactorily</b> accessible or advertised. |
| 0  | The medical school or institution has <b>not</b> implemented strategies to encourage and provide environmentally-friendly transportation options.  |
| <p><i>Score explanation: The lecture rooms are located in the city center and are easily accessible by bicycle as well as by public transport. Due to the situation of parking spaces in the vicinity of the premises, a journey by private car is unattractive. The MFac also utilises hybrid lectures, thereby allowing a reduction in commute for students living far away. Travel for out of city courses is partially reimbursed if done by train, however not enough to make it economically preferable to unsustainable alternatives. Last summer, the University of Basel as well as the University Hospital and Swiss TPH had a “Bike to work” challenge, to encourage their employees to use their bicycle to commute. Furthermore, the University Hospital is working on improving its biking infrastructure.</i></p> |  |

| <b>5.6. Does your <u>medical school</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?</b>                           |   |
|--|---|
| 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.  |
| <p><i>Score explanation: The MFac and the University Hospital offer a recycling program at their lecture rooms and exercise building but there is no organics recycling program.</i></p> |   |

| <b>5.7. Does the <u>medical school</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?</b> |   |
|--|---|
| 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: The medical school does not have its own facilities for food or beverages. However, the University of Basel launched several projects to contribute to sustainable catering. Since 2019, greenhouse gas emissions and food waste are decreasing. The menu offer is 50% vegetarian or vegan, using a variety of food with Fairtrade standards or from IP-Suisse cultivation. The proportion of certified fish and meat from animal-friendly husbandry has increased. Twice a year, the One Climate Day takes place, on which only climate-friendly menus are sold. In addition, the proportion of food transported by air is very low. The university has also adopted the city wide system of reusable cups for beverages (kooky2go), with drop-off stations in the buildings offering warm beverages. The two main lecture buildings of the medical faculty also have a student run coffee machine, with mugs for students to use. Water bottles are also easily refilled just outside of the lecture halls, with enough room on the tables to put said water bottle during lectures.*

**5.8. 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.   |

*Score explanation: In some cases, sustainability criteria have already been integrated into the procurement process (e.g., consideration of sustainability criteria in the tender for office equipment supply companies). A systematic review regarding the integration of sustainability criteria is still pending. The university guidelines also apply to the Medical Faculty. A strategy for climate neutrality in procurement of supplies is in development*

**5.9. Are there sustainability requirements or guidelines for events hosted at the medical school?**

|   |   |
|---|---|
| 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.  |

*Score explanation: The medical school does recommend to carry out events in a sustainable manner, however, the guidelines could be more concrete and incentivized. The last big event in 2023 used sustainable beverages and gifts for the participants of the panel. The University of Basel published sustainability [guidelines](#) for events.*

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

|  |   |
|--|---|
| 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.  |
| <i>Score explanation: The Department of Biomedicine has set up a "<a href="#">Green Lab Team</a>" in order to embed sustainability in its processes. The team regularly discusses sustainability issues, implements different measures and develops new ideas.</i> |   |

| 5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?   |  |
|---|--|
| 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 organised 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: Since 2021, investments have only been made in companies that meet minimum standards in terms of ecology, social behaviour and corporate governance (ESG criteria) - according to a "best in class" approach. An exclusion list prevents investments in fossil energy companies (as well as armaments, tobacco, etc.). However, 5% shares are still invested in such companies.</i> |  |

|                                     |            |
|-------------------------------------|------------|
| <b>Section Total (19 out of 32)</b> | <b>59%</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%   |

## Planetary Health Grades for the Basel School of Medicine

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

| Section   | Raw Score %  | Letter Grade |
|---|--|--------------|
| <b>Planetary Health Curriculum (30%)</b>                            | $(56/72) \times 100 = 77,78\%$   | B+           |
| <b>Interdisciplinary Research (17.5%)</b>                           | $(8/17) \times 100 = 47,06\%$  | C            |
| <b>Community Outreach and Advocacy (17.5%)</b>                      | $(7/14) \times 100 = 50,00\%$  | C            |
| <b>Support for Student-led Planetary Health Initiatives (17.5%)</b> | $(10/15) \times 100 = 66,67\%$   | B            |
| <b>Campus Sustainability (17.5%)</b>                                | $(19/32) \times 100 = 59,38\%$   | C+           |
| <b>Institutional Grade</b>  | $(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = 62,38\%$ | <b>B-</b>    |



# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which Universität Basel has participated in the Planetary Health Report Card initiative.

## Planetary Health Report Card Trends for Basel University

