

Course description: Health and the environment with a focus on climate change and sustainability

We find ourselves facing an enormous challenge when it comes to climate change. Possibly the greatest incentive to address this challenge is the threat it poses to human health. According to the Lancet Commission, the impending effects of climate change will undoubtedly disrupt the work performed within the field of public health for decades. Ongoing debates concerning climate change focus largely on extreme weather events and natural disasters. Such topics are certainly an important part of how the changing climate will impact public health; however, a changing climate will also alter, and even exacerbate, underlying conditions for numerous environmental exposures that negatively affect the population's health even today. These include air quality, one's indoor environment and heat waves. Addressing these concerns demands a broad understanding of complex issues, as countless aspects such as behavioral change, technological innovation and various prevention measures need to be considered. Several of these crucial initiatives will have conflicting objectives, while others will facilitate synergy and cooperation through common goals. For example, a key focus within the urban planning sector is to densify cities in order to reduce the need for transportation, cut energy consumption and improve overall air quality. From a societal health promotion perspective, however, this poses a challenge. In achieving their goal of condensing cities, such urban planning initiatives ultimately bring homes, apartment complexes and other buildings closer to roads, which, subsequently, increases the risk of individual exposure to air pollution and noise. City densification decisions must also be weighed against the inclusion of and access to green spaces especially within inner-cities, as such environments have been shown to promote mental health, physical activity and social inclusion. In order to solve such dilemmas and balance contradicting aims within public health, a multidisciplinary approach is needed.

This course, utilizing a multidisciplinary approach, aims to deliver knowledge and enhance understanding within the field of environmental epidemiology, with a focus on environmental health and relevant Sustainable Development Goals (SDGs). With this, the relationship between environment and health will be stressed and associated lifestyle and behavioral factors will be discussed. For instance, how do high temperatures affect the risk of cardiovascular disease and the need for emergency medical care? Further, how do heatwaves affect our behavior and how does this interplay with health? The curriculum will also emphasize the connection between health and climate change-related use of pesticides, drink water quality, and air pollution. Subjects such as climate change's impact on the removal of airborne particles and atmospheric chemistry will be explored. Again, competing objectives will be raised and evaluated. The reduction of one's carbon footprint versus climate adaptation strategies, for example, may spark debate between the use of diesel fuel or gas for transportation. This course will even analyze how people's behavior is affected and what motives exist for acclimating oneself to a changed climate. Moreover, instruction will be provided on how to evaluate and interpret health impact assessments conducted on environmental exposures. After completing the course, students will have acquired the necessary tools to actively participate in the ongoing multidisciplinary dialogue surrounding climate change and health. They will also have had the possibility to gain awareness of the environmental health's complexity and nuances, gain a greater understanding of current environmental health obstacles and goals, and, finally, be better prepared to tackle these societal challenges in a professional capacity.

The *Health and the environment with a focus on climate change and sustainability* course consists of lectures, individual assignments, as well as group exercises. Sessions will be instructed by teachers from diverse university departments including Occupational and Environmental Medicine and Environmental Psychology, among others, as well as non-academic actors, such as Region Skåne (Scania's Regional Council). Inviting experts from diverse backgrounds will help provide a variety of perspectives and facilitate multidisciplinary learning.

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Course credits: 7.5

This is a full-time (100%) course taking place between weeks 38-42 (September 14, 2020 to October 16, 2020). The course structure will consist of a mixture of group exercises, individual assignments, and lectures. To aid those students who have additional commitments, joint elements of the course, such as group exercises and lectures, will be limited to three days a week whenever possible. Parallel to these scheduled components, individual project work will be ongoing throughout the course to facilitate more in depth learning within a specific environmental health topic chosen by the student.