Profile

Health-promoting School | Strategies for Retrofitting an Existing Buildings

Background
- Our goal is to prepare the next generation of architects to create healthy and sustainable built environments that promote the well-being of building occupants.
- Retrofitting existing buildings has become increasingly popular in Germany due to a growing demand for sustainable design practices. This approach offers several advantages over new building design, such as reduced environmental impact, lower construction costs, and preservation of historical or cultural significance.
- Improving indoor environmental quality, like lighting conditions, thermal conditions or acoustics is a crucial component of retrofitting existing buildings with a health-promoting approach. Poor indoor air quality can cause respiratory problems, headaches, fatigue, and reduced cognitive function. In contrast, good indoor air quality can lead to better health, higher productivity, and improved cognitive performance.
- Schools play a vital role in shaping the future of individuals and society as a whole. They provide education, socialization, personal development, and contribute to economic development.
- By retrofitting schools with a health-promoting approach, architects can contribute to the creation of healthier and more productive indoor environments for building occupants.
Task(s)
- The task is to develop a design solution for a retrofit and extension of a specific school building.
- After the analysis of the surrounding conditions and current situation of the main building and needs for an extension, the first task will be an initial design solution.
- This initial design solution will then be examined by guided tutorials using Rhino and Ladybug to conduct studies on visual and thermal comfort. There will be introductions and tutorials to the tools at the beginning of the design and will be followed by some assignments during the semester to help implementing them in design process. No prior knowledge of the tools is required.
- In the end, an above-average healthy design contribution including the retrofitted existing school building and the new extension will be created.

Organization
- 1st event: 17.04.2023 9:00 - 12:00 p.m. – the assignments and further information will be shared by mail before Easter
- Core hours for colloquia, tutorials, and mentoring are Mondays 9:00 a.m. - 12:00 p.m. (colloquia likely longer)
- Tentative colloquium dates: 08.05., 05.06., 07.08.
- A large part of the tutorials and supervision are held in English.