Why Sustainable Infrastructure & Urban Transformation?

This course is a part of TRACKS Chalmers’ educational initiative within Sustainable Cities. Today over half of the global population lives in cities and therefore, human settlements are often seen as an opportunity to achieve sustainable development goals (SDGs). Human settlements rely on infrastructure to provide essential functions such as mobility, access to clean water and recreation. Therefore, addressing urban sustainability depends in part on the development, operation and maintenance of the infrastructure. Challenges include costs, use of resources and environmental degradation, as well as social issues such as segregation. Innovative, interdisciplinary approaches are needed to achieve sustainable infrastructure and urban transformation.

Course Framework

The course provides an interdisciplinary platform for an exchange of experience and know-how in learning disciplines linked to design of infrastructure and urban transformation in contemporary cities (see: Thematic framework) using problem-based and challenge-driven approaches. The course uses the Chalmers Johanneberg Campus as a case study for innovative urban transformation.

The course consists of two main parts:

- Part 1 (Sept.-Oct.2020) – Knowledge base: This parts aims at providing the knowledge base through obligatory thematic seminars, workshops and study visits with relevant stakeholders, linked to on-going projects at the Johnneberg Campus (Seminars and workshops booked on Tuesday afternoons)

- Part 2 (Nov.-Dec.2020) – Project: Groups work on selected design tasks to address specific issues related to thematic areas. Project can for instance focus on adaptive use of space, transport and mobility, infrastructure information development, reduction of environmental impacts, or circular economy.