Design of Sustainable Infrastructure & Urban Transformation

Why Sustainable Infrastructure & Urban Transformation?
Today over half of the global population lives in cities and therefore, human settlements are often seen as an opportunity to achieve regional and global sustainability. Cities rely on infrastructure and systems to provide essential functions such as mobility, access to clean water and recreation. Addressing urban sustainability depends in part on the development, operation and maintenance of the infrastructure and systems. There are however technical, economical, environmental and social challenges and urban transformation requires innovative, interdisciplinary approaches.

The course
This Tracks course uses problem-based and challenge-driven approaches to address urban challenges. Following a set of introductory lectures, students with different backgrounds work in groups to study and solve urban challenges. The group project provides an interdisciplinary platform for an exchange of knowledge and experience in disciplines relevant to the design of infrastructure in contemporary cities. Previous years, projects have focused on mobility, climate adaptation, information and indoor spaces.

The Chalmers campus – A playground for innovation
The course uses the Chalmers Johanneberg campus as a case study site for the group project. The campus will grow in coming decades with additional study and work spaces, as well as student housing. The development of the campus is an opportunity to link education and urban development together with stakeholders. The course is also an opportunity to engage students in the development of the campus.
Students will work with challenges provided by the stakeholders on projects dealing with the infrastructure and the systems on the campus, with the aim of improving sustainability and well-being for students and staff.