



ETH Zurich robots use new digital construction technique to build timber structures

MANUFACTURING CHANGE

ROBOTS, ARCHITECTURE AND NEW METHODS OF PRODUCTION

This two-term Terminal Design Studio will focus on the potential of leveraging computation and automation tools, technologies and techniques towards the development of novel building systems. The vehicle for this exploration will be the conception, design and development of an **Industrial Shed for the 21st Century**. Students will design a building focused on an industrial process, the exact program of which will emerge from each student's personal interests and curiosities as well as a collective studio site analysis. The more nuanced program for the Industrial Facility will be developed in the Winter term as part of a collective studio planning study, but will typically consist of between 30,000 - 60,000 square feet of space accommodating large scale manufacturing, research and development laboratories, meeting rooms, offices, etc.; essentially large, medium and small spaces. The studio will be collectively examining **a few regional areas throughout Oregon** and students will identify and develop strategies for site and program development focused around their particular industry of choice.

This studio will develop and test an array of methods for analysis and synthesis throughout the duration of our study. A **preparatory seminar** focused on exploring theories, tools, and techniques that will be essential to the development of each student's own design process will be offered as a prerequisite in the Fall term. Together in this studio, we will critically research the history of computation and automation in architecture and other industries and develop a thesis related to how automation might impact the future of industry in general, as well as to the future of the design and production of the built environment more specifically. While we will inevitably be considering the economic factors related to industrial development, of far greater interest will be the ecological value of these facilities and how they contribute to the way we might best live together in this century.

This studio will follow a **collaborative** model, where **students will work in groups** for site analysis, master planning, and the development of specific industrial building programs. **Students will form teams** around a shared focus for the design and development of their particular facility, while at the same time **developing and refining their individual process and its contribution to the collective study**. The expectation is that students will develop a comprehensive building design process that considers everything from the molecular to the territorial. This will be an intensive research-focused design studio and will be organized with several focused 'workshops' intended to help students to develop and deploy a design process leading to a forward thinking comprehensive building design.