

## Architecture and Engineering – a double degree educational program at Chalmers University of Technology

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### Abstract

Architects and engineers represent two strong professional cultures with a common history. Since the renaissance and the subsequent emergence of the modern engineering science, they have evolved in different directions to form different roles in the design, construction, and management of the built environment. The educations of the two professions have followed this development, and a comparison of the criteria for the professional degrees Master of Architecture and Master of Science in Engineering shows today great differences in what knowledge and skills are expected for each of the professions. With inspiration from the Structural Engineering and Architecture dual honors degree program at the University of Sheffield in the UK, the double degree Architecture and Engineering program was developed at Chalmers University of Technology, and in the fall of 2006 the new program welcomed its first class of students. Since the very first class it has been a popular program, and among all Swedish MSc in Engineering and Master of Architecture programs it has almost every year been the most difficult program to get admitted to. The concept of the program is a 180 ects bachelor's degree, where the fundamentals from the engineering science: mathematics, mechanics, physics and materials, is combined with history of architecture and engineering, artistic explorative courses, and the fundamentals of the architectural design process. After three years the students can choose to continue for a Master of Science in Engineering with different possible directions, from mathematics and data science to industrial ecology, acoustics, management, structural engineering, and building technology, or to continue for a Master of Architecture. For the latter they need 150 etcs minimum in pure architectural design projects. In this paper the basic concepts of the program, the culture developed around it and the strengths we can experience in the examined students will be discussed and reflected. Today students from the program can be found at architecture and engineering companies all over the world and are appreciated for their ability to address complex architectural and engineering design issues with attitudes, insights and skills from the both professions.

### References

- [1] C. Caldenby, O. Borgström, K.-G. Olsson, U. Janson, M. Lund, J. Dahlberg and Johanna Isaksson, *Architecture and Engineering - 10 Years Anniversary Book*, Chalmers, 2016.