

# Implementing a practical learning approach into civil engineering education for– “Construction safety and statics” course

**Bartosz Siedziako**

Department of Ocean Operations and Civil Engineering, Norwegian University of Science and Technology, Ålesund.

## **Abstract**

This paper presents results from replanning/reorganizing and modification of BYGA2022 course – construction safety and statics taught at the Norwegian University of Science and Technology for 4<sup>th</sup> semester students on a bachelor level. The course aims to provide knowledge on how to perform necessary calculations for finding forces acting on different types of structures and how to ensure the safety of the structural design. In order to meet those goals, the course was thoroughly modernized in the spring semester of 2022. Modifications included new lectures and exercises with real-life examples from the industry, introducing engineering software used in practice, and implementing an individual project into the course curriculum. Implemented changes were met with a positive response from students, and showed increased engagement, and a better understanding of an entire design/dimensioning process. Results of implemented changes were accessed using feedback from a reference group (student representatives), an anonymous survey, and final examination results.

**Keywords:** practical learning, project-based learning, civil engineering, higher education