



## Structural Timber Design in Curricula of Canadian Universities: Current Status and Future Needs

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### Summary:

Due to the efficiency, sustainability, and advances in firefighting technologies, the allowable height for wood buildings was increased from 4 to 6 storeys in 2015 and will be further increased to 12 storeys in the 2020 edition of the National Building Code of Canada, as a result of the advent and application of mass timber products. To match the development in the industry and the increasing need in the market for highly skilled timber engineers, structural timber design curricula at the university level must evolve to train the next generation of practitioners. At most Canadian universities, structural timber design courses are mainly provided in civil engineering departments. In this study, 31 accredited civil engineering programs in Canada were reviewed for structural wood design content at undergraduate and graduate levels based on two surveys conducted in 2018 and 2020. In the 2018 survey, the percentage of structural timber design content was estimated and compared with other engineering materials (e.g., steel, concrete, and masonry), and a similar survey was repeated in 2020 to determine if any significant changes had occurred. In early 2021, two complementary questionnaires were sent to the instructors of timber-related courses across the country to collect quantitative information, including enrollment statistics, percentage dedicated to timber design in combined material courses, and potential topics deemed critical to support the design of modern timber structures. Based on the responses provided, and also on the availability of resources and the research ongoing, the content for five advanced-level courses is proposed to address the needs of the timber design community. The findings presented in this paper will assist the timber industry, government agencies, and educational institutions in effecting potential changes to university curricula to educate the next generation of timber design professionals who will possess the necessary skills and knowledge to meet the challenges in designing modern mass timber structures.

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### Resource Link

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