Course	Circular Building Modules with Engineered Wood Products
Location	TalTech University of Technology Tallinn, Estonia Salzburg University of Applied Sciences
Department / Program	Virtual Wood University
Semester	Semester 3-6
Type	Voluntary
ECTS Credits	2
Workload	60 total hours
Time of Exam(s)	End of course or during the course
Kind and duration of Exam(s) / Assignment(s)	**1st Task:** Contribution to the market research about circular building systems upload section 1 unique uploads by each student. **2nd Task:** To create circular building system for a tiny houses based on market research information collected in first task. Build a team of 2-3 students from different countries, work out the circular building solution based on engineered wood products. Make a film with your circular building solution. **3rd Task:** Assessment of the solutions offered by the other groups
Grading	1st task forms 30% of final course grade 2nd task forms 50% of final course grade 3rd task forms 20% of final course grade To pass the course with positive grade all three tasks must be completed
Learning Methods	This module consists of seminar-style learning, readings, lectures, tutoring sessions, independent study, group discussion, group work and web based learning methods like Podcasts, Video-communication based lectures (Zoom, Microsoft Teams, etc.), Learning Management Systems (like Moodle), Cloud storage, etc.).
Prerequisite(s)	Basic knowledge in business administration is helpful, but not necessary.
Successive Course	CLT and LVL course
Learning Outcomes	– Students learn how to reduce the consumption of virgin, non-renewable resources, – Students acquire new knowledge how reclaimed building components from engineered wood can be used again, repaired remanufactured or recycled. – Students will develop their skills for analysis of building systems based on circularity aspect
Readings	– LVL Handbook (Finland) – CLT Handbooks (Sweden, Canada) – https://www.researchgate.net/publication/340711225_Circular_Building_Design_An_Analysis_of_Barriers_and_Drivers_for_a_Circular_Building_Sector – 2021 CGR Report The Circularity Gap Report – Wood and the circular economy: challenges to its recirculation – prof. Mark Hughes slides – Rethinking Timber Buildings – Arup – The new green deal – European Commission

	– Design Qualities to Guide and Inspire Building Designers and Clients VUB Architectural Engineering - Circular Design Qualities (2019.12).pdf
Summary of Content	**Introduction** 1. Actual (circular) building systems existing in the markets Challenges and obstacles and solutions for circularity. 2. Selection of the right combination of materials for a circular building system for a tiny house solution with 30m2 3. What is the ideal circular building system? Requirements for circularity of building with engineered wood products (eg GLT, CLT and/or LVL) 4. The Circularity gap in existing building and construction systems 5. Solutions for more circularity by rethinking existing systems Aim of the course: to offer a solution what would a circular building system based on engineered wood products look like?
Organisation of the course	Individual market research and upload of existing (circular) building systems Build teams of 2 or 3 students (at least from 2 countries) and develop a circular tiny house solution