

University of Waterloo School of Architecture
ARCH 276: Timber: Design, Structure and Construction
Spring 2020

Syllabus

Instructor

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Teaching Assistant

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Lectures

Wednesdays, 15:00-18:00 (EDT)
Microsoft Teams classroom
(lectures recorded for later/repeat viewing)

Tutorials

Throughout the term, upon request
Midterm Review Session: Monday 24 June 2020 20:00-23:00 (EDT)
Final Exam Review Session: week of 10 August 2020

Course Description

Processes of structural design, load determination, construction process and system selection are referenced and presented within a timber engineering context. Timber design topics such as flexural, compression and truss members, connections, and plywood construction are studied using calculations, design aids, rules of thumb and the latest CSA design standards. Case studies are invoked to provide inspiration where applicable.

Textbook

2017 Wood Design Manual
Canadian Wood Council

Grade Distribution

Assignment 1	10%
Assignment 2	10%
Assignment 3	10%
Midterm Exam	30%
Final Exam	40%

(refer to the instructional plan herein for due dates)

Course Policies & Supports

Course Delivery

It is strongly recommended that you create a physical course binder. Course notes in PDF format will be posted to the course's LEARN shell and should be printed off: these notes will be annotated, and the examples completed, during the contact period. Example solutions and other memos can be interleaved with the notes as necessary. The notes are created in the hope that can serve as a valuable reference throughout your careers.

The course will be delivered via weekly lectures on Microsoft Teams. It is recommended that you attend all lectures during their scheduled slot, both to maintain your progress in the course and ask questions of the instructor in real time. Lectures will be recorded and available for replay within Teams. Grid paper and a calculator will be required during each lecture for examples.

Assignment Policies

The assignments will be provided on LEARN with clear instructions for their submission. Refer to the instructional plan herein for due dates. The assignments are to be completed individually. Late assignments may be submitted for review and feedback but will receive no credit.

Test Policies

The midterm and final will be completed online and are therefore naturally open-textbook tests. Students will be responsible for the entirety of the course notes and the entirety of the corresponding chapters in the textbook. It is recommended that you provide tabs for important pages within both. Tests are to be completed individually and will be created with safeguards in place to ensure no two students have identical problem sets.

Accommodations

AccessAbility Services (www.uwaterloo.ca/disability-services) collaborates with all academic departments to arrange appropriate accommodations for with students with disabilities. If you require academic accommodations, please register with the office at the beginning of each academic term and contact the course instructor. Students seeking accommodations due to COVID-19 are to follow COVID-19-related accommodations as outlined by the university here: (www.uwaterloo.ca/coronavirus/academic-information).

Institutional Policies

Academic Integrity

All members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility in order to maintain a culture of academic integrity. For more details, refer to the Academic Integrity website (www.uwaterloo.ca/academic-integrity).

Students are expected to know what constitutes academic integrity to avoid committing an academic offense, and to take responsibility for their actions. Students who are unsure whether an action constitutes an offense, or who need guidance to avoid offenses (e.g., plagiarism, cheating, group work and “collaboration”) should inquire with the course instructor, academic advisor, or the undergraduate Associate Dean.

Grievances (Policy 70)

A student who believes that a decision affecting some aspect of their university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4 (www.uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70). When in doubt please be certain to contact the department’s administrative assistant who will provide further assistance.

Discipline (Policy 71)

For information on categories of offences and types of penalties, students should refer to Policy 71 (www.uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71). For typical penalties, see Guidelines for the Assessment of Penalties (www.uwaterloo.ca/secretariat/policies-procedures-guidelines/guidelines/guidelines-assessment-penalties).

Appeals (Policy 72)

A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed. A student who believes they have grounds for an appeal should refer to Policy 72 (www.adm.uwaterloo.ca/infosec/Policies/policy72.htm)

Instructional Plan

13 May 2020 (Wednesday)	1	Wood as a Material
	2	Wood as a Structural Member
20 May 2020 (Wednesday)	3	Limit States Design
	4	Wood as a Design Consideration
27 May 2020 (Wednesday)	5	Tension Members
3 June 2020 (Wednesday)	6	Compression Members
10 June 2020 (Wednesday)	7	Bending Members
12 June 2020 (Friday)	Assignment 1 Due	
17 June 2020 (Wednesday)	8	Combined Loading
24 June 2020 (Wednesday)	Midterm Exam	
1 July 2020 (Wednesday)	9	Bearing
7 July 2020 (Tuesday)	Assignment 2 Due	
8 July 2020 (Wednesday)	10	Connections
15 July 2020 (Wednesday)	11	Lateral System Design
22 July 2020 (Wednesday)	<i>Lateral System Design (continued)</i> Assignment 3 Due	
29 July 2020 (Wednesday)	12	Modern Design Considerations
14 August 2020 (to be confirmed)	Final Exam	