

## PhD Course: **Journal Club in Wood-Based Biopolymers**

### **Scope and purpose:**

The course “Journal Club in Wood-Based Biopolymers” is a PhD course designed for students eager to deepen their understanding of current research at the interface of polymer science, simulations, and sustainable materials. This journal club focuses on recent publications in the field, with a strong emphasis (but not limited to) on computational studies—including molecular dynamics, coarse-grained models, and multiscale approaches—to understand the structure, properties, and interactions of lignin, cellulose, and hybrid systems. Experimental and computational studies are both welcome, with the aim of fostering cross-disciplinary insight and dialogue between modeling and experimental approaches. This course is ideal for PhD students working in materials science, and/or computational chemistry, especially those focusing on biobased and renewable materials.

### **Course content:**

- Regular meetings every 3–4 weeks (duration 1 hour).
- Each seminar session features a student-led presentation and group discussion of 1–2 research articles. Every presentation should be around 30 minutes followed by 30 minutes discussion.
- All participants are expected to read the article(s) before each seminar and engage actively in the discussion.
- Critical thinking and interdisciplinary insights are encouraged.

### **Course start and duration:**

The course starts in May 2025 and runs until April 2026. The course will be held in hybrid mode (in-person and zoom) where LiU students are expected to present in-person for the seminars.

### **Number of points:**

3 ECTS

### **Learning outcomes:**

- Relate your own research to the global state-of-the-art research in the field.
- Critically evaluate research papers in the field of wood biobased materials.

### **Course literature:**

The course literature will comprise of articles from scientific journals.

### **Examination and grades scale:**

The examination is based on **active participation throughout the course**, including:

- Regular attendance at seminar sessions
- Presenting the selected research articles
- Engaging actively in discussions during other participants' presentations

Grading is on a **pass/fail** basis. To pass the course, students must have attended at least 80% of the seminars and present at least three times.

**Deadline for registration:**

9 May 2025

**Sign in:**

Send email to [aleksandar.mehandzhiyski@liu.se](mailto:aleksandar.mehandzhiyski@liu.se)

**Coordinator:**

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