

# Systems perspectives on biomass resources

## PhD Course within the Bio4Energy Graduate School

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<b>Extent and credits:</b>	7.5 hp (ECTS)
<b>Schedule overview:</b>	9-13 November 2026 (onsite in Luleå): Lectures and workshops, project initialization November 2026 to March 2027: project work, online lectures XX March 2025 (onsite in Luleå): seminar, project presentations
<b>Registration:</b>	<a href="#">Register through this link</a>
<b>Deadline for registration:</b>	30 September 2026
<b>More information:</b>	<a href="#">Preliminary schedule and other information</a> (Bio4Energy website) <a href="#">Course plan</a> (LTU website)
<b>Course coordinator:</b>	Elisabeth Wetterlund, <a href="mailto:elisabeth.wetterlund@ltu.se">elisabeth.wetterlund@ltu.se</a>

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This course focuses on systems perspectives and systems analysis related to bioenergy, biomaterials and bioresources. The main aim is to provide the student knowledge to be able to put her/his own research into a larger perspective.

The course is recommended for students with an interest in bioresources, biorefineries and similar topics at the PhD or postdoctoral level, as well as institute or industry representatives who wish to broaden their perspectives. We welcome both students that are already familiar with systems analysis, and students that are otherwise more focused on fundamental or experimental research.

The course is centered around three themes:

- taking a systems perspectives approach,
- sustainability and the role of biomass in a sustainable society,
- systems analysis tools and methods, including energy systems modelling, environmental systems analysis, process modelling and integration, and techno-economic evaluation.

