



**Course: Crash Course in Pulp and Paper Technology (3 credits)**

Course leader: **Prof. Sören Östlund**

Date: **May 24 – 25, 2021**

Place: **Digital on-line course**

**Lecturers:**

|                            |                 |  |     |
|----------------------------|-----------------|--|-----|
| Dr Mikael Ankerfors        | AFRY            | <a href="mailto:mikael.ankerfors@afconsult.com">mikael.ankerfors@afconsult.com</a> | MA  |
| Prof. Nippe Hylander       | AFRY            | <a href="mailto:nippe.hylander@afconsult.com">nippe.hylander@afconsult.com</a>     | NH  |
| Prof. Mikael Lindström     | KTH             | <a href="mailto:mil@kth.se">mil@kth.se</a>   | MLi |
| Prof. Peter Rättö          | RISE Bioeconomy | <a href="mailto:peter.ratto@ri.se">peter.ratto@ri.se</a>                           | PR  |
| Professor Daniel Söderberg | KTH             | <a href="mailto:dansod@kth.se">dansod@kth.se</a>                                   | DS  |
| Dr Paul Krochak            | RISE Bioeconomy | <a href="mailto:paul.krochak@ri.se">paul.krochak@ri.se</a>                         | PK  |
| Prof. Lars Wågberg         | KTH             | <a href="mailto:wagberg@kth.se">wagberg@kth.se</a>                                 | LW  |
| Prof. Sören Östlund        | KTH             | <a href="mailto:soren@kth.se">soren@kth.se</a>                                     | SÖ  |

**Monday, 2021-05-24, 9.15-17.00**

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| Lecturer/laboratory no; SUBJECT  | LECTURER |
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| <b>1.</b> (9.15-11.00) Business prospects for the pulp and paper industry - The Global Forest Industry in transformation | 2 hr NH  |
| LUNCH  |          |
| <b>2.</b> (12.15-14.00) Pulp manufacturing   | 2 hr ML  |
| <b>3.</b> (14.15-15.00) Microfibrillar cellulose   | 1 hr MA  |
| <b>4.</b> (15.15-17.00) Papermaking (wet end, forming)   | 2 hr DS  |

**Tuesday, 2021-05 -25, 08.15-17.00,**

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| Lecturer/laboratory no; SUBJECT                                    | LECTURER |
|--|----------|
| <b>5.</b> (8.15-10.00) The products of the pulp and paper industry | 2 hr CH  |
| <b>6.</b> (10.15-11.00) Papermaking (pressing, drying)             | 1 hr CH  |
| <b>7.</b> (11.15-13.00) Papermaking (calendaring, coating)         | 2 hr PR  |
| LUNCH  |          |
| <b>8.</b> (14.15-16.00) End-use and converting properties          | 2 hr SÖ  |
| <b>9.</b> (16.15-18.00) Chemicals in papermaking                   | 2 hr LW  |

## **Assessment**

In order to get 3 credits in the graduate education, the course participants should write (in teams of two (preferably))

- a short reflective essay/report on a topic related to the lectures, and
- a review of one such essay from another group.

The topic of the essay should focus on manufacturing of a new paper product and contain elements of consideration from all (or almost) all lectures. It is required that the students should look for additional information on details in the design of the new product or alternative opinions stated by people or companies on the internet or in the literature.

Examples of essay topics are listed below, but the students are encouraged to define their own topic based on interest and experience. The chosen topic should be communicated with the course leader before the work is initiated.

- A new printing grade for digital ink-jet printing
- Improved bending stiffness of paperboard
- Trouble-shooting converting problems in the packaging industry
- Using microfibrillar cellulose to expand the property window of paper products

Stockholm, 2021-04-12

*Sören Östlund*