



Ring spinning - Interactive laboratory course Ringspinning - Interaktiv laborationskurs

2 credits

2 högskolepoäng

Ladok Code: AT1RI2

Version: 1.0

Established by: Committee for Education in Technology 2023-01-27

Valid from: Autumn 2023

Education Cycle: First cycle

Main Field of Study (Progressive Specialisation): Textile Technology (G1F)

Disciplinary Domain: Technology

Prerequisites: General entry requirements for university studies.

Passed result in the course Textile Overview - Fibre and yarn technology, 3 credits

Subject Area: Textile Technology

Grading Scale: Seven-degree grading scale (A-F)

Content

The course aims to give the student an understanding of ring spinning and its preparatory steps. The introductory lectures cover the spinnability of fibres, preparatory steps to ring spinning, and the ring spinning machine. An interactive lab session demonstrates the preparation and production of a ring-spun yarn, providing an understanding of the process from fibre to yarn. Based on the settings shown, the student calculates the changes required to achieve a yarn of a different quality. The interactive laboratory session is accessed via a website, allowing for remote learning.

Learning Outcomes

After completing the course, the student will be able to:

Knowledge and understanding

- 1.1 describe the preparatory steps for ring spinning,
- 1.2 describe how different fibre properties are expected to affect spinnability,
- 1.3 describe basic concepts and processes of ring spinning,
- 1.4 describe the parts of the ring spinning machine and how they can be modified to achieve a yarn of the desired quality,

Skills and abilities

- 2.1 based on the characteristics of a given yarn and machine settings, be able to change settings to achieve a yarn with different characteristics,
- 2.2 produce documentation on the process and its results,

Evaluation ability and approach

- 3.1 evaluating and assessing machine settings based on a pre-yarn and/or yarn.

Forms of Teaching

Teaching is done entirely remotely through digital lectures and an interactive laboratory session. Teaching is conducted in English.

The language of instruction is English.

Forms of Examination

The course will be examined through the following examination elements:

Lab report

Learning outcomes:

Credits: 0.5

Grading scale: Fail (U) or Pass (G)

Exam

Learning outcomes:

Credits: 1.5

Grading scale: Seven-degree grading scale (A-F)

If the student has received a decision/recommendation regarding special pedagogical support from the University of Borås due to disability or special needs, the examiner has the right to make accommodations when it comes to examination. The examiner must, based on the objectives of the course syllabus, determine whether the examination can be adapted in accordance with the decision/recommendation.

Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

Literature and Other Teaching Methods

The course literature is in English.

Klein, W. (2018) *The Rieter Manual of Spinning - Volume 4: Ring Spinning*. Berlin: Rieter Holding.

Interactive laboratory session where the student practices changing settings on a ring spinning machine.

Supplementary material is also available via the university's learning platform.

Student Influence and Evaluation

The course is evaluated in accordance with current guidelines for course evaluations at the University of Borås in which students' views are to be gathered. The course evaluation report is published and returned to participating and prospective students in accordance with the above-mentioned guidelines, and will be taken into consideration in the future development of courses and education programmes. Course coordinators are responsible for ensuring that the evaluations are conducted as described above.

Miscellaneous

This syllabus is a translation from the Swedish original.