

TISSUE ANALYSIS COURSE, HBS-DP, 2026

<https://www oulu.fi/en/education-search/tissue-analysis-course-0>

Time: 13.3. – 20.3.2026

Organizers: Health and Biosciences Doctoral Programme, Biocenter Oulu, Biobank Borealis of Northern Finland, Faculty of Medicine Laboratory Unit together with Research Units of Translational Medicine and Clinical Medicine

Target group: Doctoral students in the fields of Health and Biosciences, **lectures open for all**

Credits: 1 ECTS (participation in all lectures, providing feedback)

Course enrolment: Registration via Peppi 1.12.2025-20.2. 2026, course code: *DP00AL85-3005*

Evaluation criteria: Passed/failed according to participation in lectures and providing feedback

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LECTURE PROGRAMME

Friday 13th March, 2026, Theme – Mouse sample collection

Computer class 286A/286B, lecture

9:00-9:15	Introduction to the course Anne Heikkinen, BCO TTP Core
9:15-10:00	Mouse as a model for human diseases Anniina Hiltunen, BCO TTP Core
10:00-10:15	<i>Coffee break</i>
10:15-11:15	From tissue to biomedical sample Emmi Kapiainen, BCO TTP Core
11:15-11:45	Introduction to mouse necropsy Miia Salo, BCO TTP Core

Monday 16th March, 2026, Theme – Microscopic anatomy

Computer class 286A/286B, lecture

10:00-11:00	Basic histological structures Sanna Palosaari, RU of Translational Medicine
11:00-12:00	Primary pathological processes Sanna Palosaari, RU of Translational Medicine
12:00-13:00	<i>Lunch break</i>
13:00-14:30	Ultrastructural phenotyping by electron microscopy Ilkka Miinalainen, BCO EM Core

Wednesday 18th March, 2026, Theme – Sample Visualization

Lecture hall F202, lecture

- 9:15-10:15 **Common histological staining methods and artefacts**
Markus Mäkinen, RU of Translational Medicine
- 10:15-10:30 *Coffee break*
- 10:30-11:30 **Introduction to the collection of digital images on human pathologies**
Markus Mäkinen, RU of Translational Medicine
- 11:30-12:45 *Lunch break*

Computer class 286A/286B, lecture

- 12:45-13:45 **Principles of IHC and *in situ* hybridization methods**
Katja Porvari, Faculty of Medicine Laboratory Unit
- 13:45-14:15 **Possibilities in utilizing Biobank samples in research**
Raisa Serpi, Biobank Borealis of Northern Finland

Thursday 19th March, 2026, Theme – Preparing for image analysis

Computer class 286A/286B, lecture

- 12:30-13:30 **Basics in image analysis**
Veli-Pekka Ronkainen, BCO LM Core
- 13:30-14:30 **Prospects of the open-access QuPath image analysis tool**
Juha Väyrynen, RU of Translational Medicine

Friday 20th March, 2026, Theme – Image analysis

Computer class 286A/286B, lecture

- 12:00-13:00 **The Visiopharm image analysis software features**
Anne Heikkinen, BCO TTP Core