



Practical Super-Resolution Microscopy Course Schedule

Day 1 Monday October 6, 2025

0900-0915: Course Introduction

0915 -1000: Flash talks (personal intro and research interests; max two slides; 2-3 min each)

1000 –1030 – Coffee

1030 -1130: Lecture 1: General introduction to super-resolution imaging – Lecturer: Christoffer Lagerholm.

Topics: Diffraction limits of lateral and axial resolution.

Some examples of super-resolution imaging data

1130-1200: Lecture 2: Image Data Storage on OMERO/OMERO Figure – Lecturer: Junel Solis

1200-1300: Lunch

1300-1400: Lecture 3: Enhanced Confocal/Zeiss Airyscan/Leica Lightning – Lecturer: Jouko Sandholm

1400-1500: Lecture 4: STED microscopy – Lecturer: Elena Tcarenkova

1500-1530: Coffee

1530-1700: Practical session 1 Rotation 1- Zeiss Airyscan/Leica Lightning/Image reconstruction of acquired data (3 groups; 1.5h each) – Instructors: Lagerholm/Sandholm/Rautaniemi

Day 2 Tuesday October 7, 2025

0900-1000: Lecture 5: SIM microscopy – Lecturer: Christoffer Lagerholm

1000-1030: Coffee

1030-1130: Lecture 6: SMLM microscopy – Lecturer: Kaisa Rautaniemi

1130-1230: Lunch

1230-1330: Lecture 7: Intro to Image Analysis – Lecturer: Pasi Kankaanpää

1330-1500: Practical Session 1 Rotation 2 – Zeiss Airyscan/Leica Lightning/Image reconstruction of acquired data (3 groups; 1.5h each) – Instructors: Lagerholm/Sandholm/Rautaniemi

1500-1530: Coffee

1530-1700: Practical Session 1 Rotation 3 – Zeiss Airyscan/Leica Lightning/Image reconstruction of acquired data (3 groups; 1.5h each) – Instructors: Lagerholm/Sandholm/Rautaniemi

Day 3 Wednesday October 8, 2025

0900-1200 Practical Session 2 Rotation 1– STED/SIM/SMLM (3 groups; 3h each) – Instructors: Lagerholm/Sandholm/Rautaniemi/Tcarenkova

1200-1300 Lunch

1300-1600 Practical Session 2 Rotation 2– STED/SIM/SMLM (3 groups; 3h each) – Instructors: Lagerholm/Sandholm/Rautaniemi/Tcarenkova

Day 4 Thursday October 9, 2025

0900-1200 Practical Session 2 Rotation 3– STED/SIM/SMLM (3 groups; 3h each) – Instructors: Lagerholm/Sandholm/Rautaniemi/Tcarenkova

1200-1300 Lunch

1300-1500 Practical Session 3 - Image Analysis – Instructors: Solis/TBA

1500-1700 Analysis and Presentation preparation

Day 5 Friday October 10, 2025

0900-1030 Analysis and Presentation preparation

1030-1200 Course round up and group presentations