

	Monday June 10 Phenomics	Tuesday June 11 Imaging stress	Wednesday June 12 Metabolomics	Thursday June 13 Field Phenomics	Friday June 14 Integrated omics
8-9	Breakfast together Viikki*	Breakfast together Viikki*	Breakfast together Viikki*	Breakfast together Viikki*	Breakfast together Viikki*
09.00	Course introduction Teachers introduction (all teachers) K111/C1	EnBlightMe – detecting plant diseases in the field (Erik Alexandersson)	Journal Club: Student presentations of the pre- assigned literature in groups (all teachers) break	Field phenomics (Morten Lillemo)	Gene ontology lecture (Erik Alexandersson)
10.30	break	break		break	break
11.00	Low cost phenotyping set ups and Specalyzer (Aakash Chawade)	Chlorophyll fluorescence for plant stress phenotyping (Mirko Pavicic)	Introduction to Metabolomics (Markku Keinänen)	Public private partnerships for breeding (Magnus Göransson Agriculture University of Iceland)	GoMapMan and MapMan for metabolomics analysis (Špela Baebler)
12.00	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break
13.00	Introduction of the NaPPI facilities (Katriina Mouhu)	Hyper- and multispectral imaging for health and disease (Markku Keinänen)	Workshop 3. Metabolomics methods, visit to metabolomics lab and introduction to data analysis (Markku Keinänen, Nina Sipari)	Workshop 4. Processing and analysis of drone images (Ingunn Burud and Sahameh Shafiee)	Workshop 5. Metabolomics with GoMapMan (EA, SB)
14.00	Workshop 1. in 4 groups Two groups: 1. Arabidopsis under stress -> Metabolomics sampling 2. Large plant phenotyping	Workshop 2. in 4 groups Two groups: 1. Arabidopsis under stress -> Metabolomics sampling 2. Large plant phenotyping			
15.00	Two groups: 3. TBD 4. Specalyzer	Two groups: 3. TBD 4. Specalyzer			
16.00	Workshop 1 sum up (meeting rooms B145, 117)	Workshop 2 sum up (meeting rooms B145, 117)	Workshop 3 sum up	Course wrap up and evaluation	Departure
17.30 Evening:	Students introduction over pizza dinner	Preparation of journal club presentations and questions in assigned groups	Departure @ 17.00 Social event on Suomenlinna island -starts at 18.35		

Viikki* Breakfast is available for all students at the Viikki campus cafeteria “Ladonlukko” between 7.45-8.55 am, address: Latokartanonkaari 9, building A.

The main lecture hall for the course is C1/K111 in Latokartanonkaari 5, C-building

