

Schedule:

(Plant Biology and Biotechnology) (Nov. 2, 2015 - Jan. 2016)

Teachers:

- Leszek Kleczkowski (LK) leszek.kleczkowski@umu.se, tel. 786 5474
- Edouard Pesquet (EP) edouard.pesquet@umu.se, tel. 786 6918
- Anita Sellstedt (AS)
- Catherine Bellini (CB)
- Johannes Hanson (JH)
- Kerstin Richau (KR)
- Laszlo Bako (LB)
- Olivier Keech (OK)
- Per Gardeström (PG)
- Stefan Jansson (SJ)
- Totte Niittyla (TN)

Teaching assistants:

- Abdellah Lakehal (AL) abdellah.lakehal@umu.se

Textbook (suggested): A.M. Smith et al. – Plant Biology (Garland Science), 2010

week 45

Monday, Nov. 2

9.00-9.30	Introduction (LK)	KBF30
9.30-11.30	Plant cell (lecture) (LK)	KBF30
13.00-14.00	Cell cycle and mitosis (lecture) (EP)	KBF30

Tuesday, Nov. 3

9.00-11.00	Studying protein function in plants (lecture) (LK)	KBF30
11.15-12.00	How to search for scientific literature? (LK)	
13.00-15.00	Plant anatomy (lecture) (EP)	KBF30

Wednesday, Nov. 4

8.30-10.45	Tissue-specific gene expression (lab) (AL)	KBF30, KB4C9
13.00-16.30	Tissue-specific gene expr. (lab) cont. (AL)	KB4C9

Thursday, Nov. 5

9.00-11.00	Photomorphogenesis and plant hormones (lecture) (LK)	KBF30
11.15-11.45	Suggesting written assignments (LK)	KBF30

Friday, Nov. 6

9.00-12.00	Plant bioengineering – goals and methods I & II (lecture & discussion) (OK)	KBF30
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week 46

Monday, Nov. 9

- 9.00-11.00 Principle and applications of plant *in vitro* culture (lecture) (EP) KBF30
11.15-11.45 Handing out 1st Reading assignment (EP) KBF30

Tuesday, Nov. 10

- 9.00-9.30 Introduction to cell culture lab (EP)
9.30-12.00 Tissue culture lab (**part 1**) – preparation of medium, sterilization of explants for rooting, callogenesis and organogenesis (lab) (AL) KB4C9

Wednesday, Nov. 11

- 9.00-11.00 Plant specific compounds (lecture) (EP) KBF30

Thursday, Nov 12

- 9.00-11.00 Photosynthesis & respiration (**part 1**) (lecture) (LK) KBF30

Friday, Nov. 13

- 9.00-11.00 Water flux in plants (lecture) (EP) KBF30
11.15-12.00 Discussing the 1st Reading assignment (EP) KBF30
Deadline for reports for the tissue-specific gene expression lab

week 47

Monday, Nov. 16

- 9.00-11.00 Photosynthesis & respiration (**part 2**) (lecture) (LK) KBF30
11.15-11.30 Handing out 2nd reading assignment (LK) KBF30

Tuesday, Nov. 17

- 9.00-12.00 Tissue culture lab (**part 2**) – analysis of explants for rooting, callogenesis, and organogenesis (lab) (AL) KB4C9

Wednesday, Nov. 18

- 9.00-11.00 Photosynthesis & respiration (**part 3**) (lecture) (LK) KBF30

Thursday, Nov. 19

- 9.00-11.00 Cell elongation and plant growth (lecture) (EP) (lecture) KBF30

Friday, Nov. 20

- 10.00-12.00 Plant Biotechnology in agriculture (I) – Existing traits (lecture) (LB) KBF30
11.15-12.00 Discussion of 2nd reading assignment (LK) KBF30

week 48

Monday, Nov. 23

- 9.00-11.00 Plant Biotechnology in agriculture (II) - new traits (LB) KBF30

Tuesday, Nov. 24

9.00-11.00 Biotechnology and biofuels I. Ethanol (lecture) (AS) KBF30

Wednesday, Nov. 25

9.00 – 11.00 Biotechnology and biofuels II. Hydrogen (lecture) (AS) KBF30

Thursday, Nov. 26

9.00-11.00 Tree genetics and genomics (lecture) (SJ) KBF30

Friday, Nov. 27

9.00-11.00 Epigenetics (lecture) (TN) KBF30

week 49

Monday, Nov. 30

9.00-10.30 Nitrogen uptake and metabolism (lecture) (LK) KBF30

10.45-11.30 Choice of selected topic (writing assignment) (LK) KBF30

Tuesday, Dec. 1

9.00-11.00 Plant-microbe interactions (a lecture) (KR) KBF30
Work on selected topic (written assignment)

Wednesday, Dec. 2

9.00-11.00 GMO plants (lecture and discussion) (EP) KBF30

11.15-11.30 Handing out 3rd reading assignment (KR) KBF30
Work on selected topic (written assignment)

Thursday, Dec. 3

9.00-14.00 Tissue culture lab (part 3) – analysis of explants for rooting, callogenesis,
and organogenesis (lab) (AL) KB4C9
Work on selected topic (written assignment)

Friday, Dec. 4

Work on selected topic (written assignment)

week 50

Monday, Dec. 7

9.00-17.00 Carbon metabolism (intro & lab) (PG) KB4C10 KB4C9

Tuesday, Dec. 8

9.00-10.00 Discussion of 3rd reading assignment (KR) KBF30
Work on selected topic (written assignment)

Wednesday, Dec. 9

9.00-11.00 UPSC - a world leading research environment in plant biotechnology (CB) KBF30
Work on selected topic (reports & writing assignment)

Thursday, Dec. 10

13.00-15 Protein transport and sorting in plants (lecture) **(LK)**
Work on selected topic (reports & written assignment)

KBF30

Friday, Dec. 11

Work on selected topics (reports and writing assignment)

week 51

Monday, Dec. 14

Work on selected topic (writing assignment)
Deadline for reports on C-metabolism lab

Tuesday, Dec. 15

9.00-11.00 Sugar regulation (a lecture) **(JH)**
Work on selected topic (writing assignment)

Wednesday, Dec. 16

Deadline for the writing assignment

Christmas break

week 2, 2016

Finishing corrected writing assignments
Preparation for the exam

Friday, Jan. 8, 2016: Deadline for the corrected writing assignments

week 3, 2016

Monday, Jan. 11

09.00-14.00 **EXAM** (Östra Pavilj.)

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