



GÖTEBORG UNIVERSITY
Faculty Board of Science

BIO530, Växtmolekylärbiologi och -bioteknologi, 15 högskolepoäng
Plant Molecular Biology and Biotechnology, 15 higher education credits

Avancerad nivå/Second cycle

1. Confirmation

The syllabus was confirmed by the Faculty Board of Science on 2007-06-28 to be valid from 2007-07-01 until 2010-06-30.

Responsible department: Department of Plant and Environmental Science

Field of education: Science

Main subject: Biology

This course will replace BIN742. BIO530 and BIN742 can not be included in the same degree or be included in two different degrees where one of the degrees builds upon the other.

2. Position in the educational system

The course Plant Molecular Biology and Biotechnology, 15 higher education credits, is a second cycle, single subject course.

3. Entrance qualifications

Biology, basic course, 60 higher education credits (40 p) and Basic Chemistry, 30 higher education credits (20 p) or Molecular biology I and II, basic course, 60 higher education credits (40 p) and Basic Chemistry, 30 higher education credits (20 p) or equivalent.

4. Course content

The course will consist mainly of lectures and laboratory work, with some seminar. Some of the principle subjects taught will include:

- Gene structure, organization and expression in plants
- Plant tissues and development
- Plant transformation, regeneration and molecular/biochemical analysis of transgenic plants.
- Plant genetics and biotechnology including discussions on genetically modified plants in agriculture and other commercial applications.
- Functional genomics and proteomics

- Plant responses to environmental stresses – abiotic and biotic

5. Learning outcomes

After completing the course the students should:

- have a deeper knowledge of various cellular, biochemical, genetic and molecular processes within plants,
- understand the basic concepts and techniques important for understanding these processes, as well as the scientific principles that underlie and drive the rapid development of plant biotechnology and
- in particular, have a better understanding of the development and use of genetically modified plants in modern agriculture, both present and future.

6. Required reading

The required reading is published in a separate document.

7. Assessment

The final grade will be based on an exam at the end of the course. To pass the course, students must also attend all laboratories and submit an acceptable report for each.

A student who has failed a test twice has the right to change examiner, unless weighty argument can be adduced. The application shall be sent to the board of the department and has to be in writing.

8. Grading scale

The grades are Pass, High Pass or Fail.

9. Course evaluation

The results of the evaluation will be communicated to the students and will function as a guide for the development of the course.

10. Additional information