

## **BIOR59, Biology: Genetic Analysis I, 7.5 credits**

*Biologi: Genetisk analys I, 7,5 högskolepoäng*

Second Cycle / Avancerad nivå

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### **Details of approval**

The syllabus is an old version, approved by Study programmes board, Faculty of Science on 2008-06-11 and was valid from 2008-06-11 , autumn semester 2008.

### **General Information**

The course is part of the main fields of Biology and Molecular Biology at the Faculty of Science. The course is an optional second-cycle course for a degree of Bachelor or Master of Science in Biology. The course is also offered as a single subject course. The language of instruction is English.

*Language of instruction:* Swedish and English

The course is given in English.

#### *Main field of studies*

Biology

Molecular Biology

Molecular Biology

Biology

#### *Depth of study relative to the degree requirements*

A1N, Second cycle, has only first-cycle course/s as entry requirements

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### **Learning outcomes**

On completion of the course the student shall be able to:

- explain the dynamics of the inheritance process from cell- to population level
- be familiar with genetic methods
- be trained in genetic problem-solving

- be trained in oral and written result presentation
- account for some of the practical applications of genetics.

## Course content

- analysis of inheritance in crosses and pedigree data
- use and properties of genetic markers
- non-Mendelian inheritance and epigenetic phenomena
- basic genetic linkage analysis and gene mapping
- applications in medical genetics
- analysis of complex traits
- classical population genetics
- evolution of genetic and reproductive systems.

## Course design

The teaching consists of lectures, calculation exercises, laboratory sessions, projects and study visits. Participation in laboratory sessions, study visits and projects, and thereby other integrated teaching, is compulsory.

## Assessment

Examination consists of several small examinations during the course and a written final examination. For students who have not passed the regular examination, an additional examination in close connection to this is offered.

*Subcourses that are part of this course can be found in an appendix at the end of this document.*

## Grades

Marking scale: Fail, Pass, Pass with distinction.

To pass the entire course, approved examination, approved laboratory reports, passed written assignments and participation in all compulsory components are required.

The final grade is decided through a joining of the results of the parts that are included in the examination.

## Entry requirements

For admission to course is required English 6 and 90 credits of scientific studies including knowledge equivalent to MOBA01 Cell Biology 15 credits, BIOA01 Genetics and Microbiology 15 credits, and Chemistry 15 credits.

## Further information

The course may not be included in a degree together with BIO616 Genetics 15 credits.

## Subcourses in BIOR59, Biology: Genetic Analysis I

Applies from V09

0801 Genetic Analysis I, 7,5 hp  
Grading scale: Fail, Pass, Pass with distinction