



LUND
UNIVERSITY

Faculty of Science

BIOR63, Biology: Molecular Microbiology, 15 credits

Biologi:Molekylär mikrobiologi, 15 högskolepoäng

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2009-10-22 to be valid from 2009-10-22, spring semester 2010.

General Information

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

Language of instruction: Swedish and English

Main field of studies

Biology

Molecular Biology

Depth of study relative to the degree requirements

A1F, Second cycle, has second-cycle course/s as entry requirements

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Learning outcomes

The aim of the course is that students shall have, on completion of the course, acquired the following knowledge and skills:

Knowledge and understanding

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

- understand definitions and principles of the molecular genetics of bacteria
- describe molecular genetic processes in prokaryotic organisms
- understand relevant molecular genetic methods and their applicability and limitations.

Skills and abilities

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

- practically apply molecular genetic technologies
- interpret, compile and present experimental results in a scientific way for a given target group.

Course content

- The structure, replication, expression, and organisation of genes in bacteria
- Modification and restriction of DNA
- Mutations and suppression of mutations
- DNA repair Regulation of gene expression in bacteria and viruses
- Recombination in bacteria
- Plasmids
- Transposons
- Gene technology and its applications.

Course design

The teaching consists of lectures, written assignments, laboratory sessions, and group discussions. Participation in laboratory sessions, group discussions, and thereby other integrated teaching, is compulsory.

Assessment

Examination takes place as a written examination.

For students who have not passed the regular examination, additional examinations in close connection to this are 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, approved written assignments, and participation in all compulsory parts are required.

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

Entry requirements

For admission to the course, English 6 and 105 credits of scientific studies including knowledge corresponding to MOBA01 Cell Biology 15 credits, BIOA01 Genetics and Microbiology 15 credits, BIOR18 Microbiology 15 credits, BIOR61 Molecular Genetics 15 credits, and Chemistry 30 credits, are required.

Further information

The course may not be included in a degree together with BIO629 Prokaryotic Molecular Genetics 15 credits, or BIOR19 The Molecular Genetics of Bacteria and Phages 15 credits.

Subcourses in BIOR63, Biology: Molecular Microbiology

Applies from H13

- 1311 Theory, 10,0 hp
Grading scale: Fail, Pass, Pass with distinction
- 1312 Laboratory Work and Assignments, 5,0 hp
Grading scale: Fail, Pass

Applies from H09

- 0901 Molecular Microbiology, 15,0 hp
Grading scale: Fail, Pass, Pass with distinction