



**LUND**  
UNIVERSITY

Faculty of Science

## **MOBA03, Molecular Biology, 15 credits**

*Molekylärbiologi, 15 högskolepoäng*

**First Cycle / Grundnivå**

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### **Details of approval**

The syllabus was approved by on 2007-03-01 and was last revised on 2016-02-24 by Study programmes board, Faculty of Science. The revised syllabus applies from 2016-07-01, autumn semester 2016.

### **General Information**

The course is a compulsory course for a degree of Bachelor of Science in Molecular Biology.

*Language of instruction:* Swedish

*Main field of studies*

Biology

Molecular Biology

*Depth of study relative to the degree requirements*

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

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### **Learning outcomes**

The aim of the course is that students after completion of the course shall have acquired the following knowledge and proficiencies:

#### **Knowledge and understanding**

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

- account for basic molecular and biochemical structures and processes in eukaryotic cells
- give examples of the basic structure and differentiation of, and cooperation between, different cell and tissue structures in eukaryotic organisms

## Competence and skills

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

- use basic methods in molecular and cell biology
- interpret laboratory results based on literature
- communicate orally and in writing in a basic scientific way

## Judgement and approach

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

- critically, and at a basic level, discuss the use of genetically modified organisms in research and society

## Course content

The course includes the following topics:

Organisation and regulation of genomes and gene expression in the cell nucleus and organelles. The energy metabolism of the cell. The barrier system of the cell Signalling and communication within and between cells. Research and societal aspects on the use of genetically modified organisms. Development and differentiation of multi-cellular organisms.

## Course design

The teaching consists of lectures, laboratory sessions, group discussions, debates and group assignments. Participation in all components except lectures is compulsory.

## Assessment

Examination takes place through a written examination as well as through compulsory parts. 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 and approved compulsory parts are required.

The final grade is determined by a weighing of the results of the parts that are included in the examination.

## **Entry requirements**

For admission to the course, knowledge corresponding to MOBA01 Cell Biology 15 credits, BIOA01 Genetics and Microbiology 15 credits, MOBA02 The Chemistry of the Cell 15 credits, as well as 30 credits in chemistry, is required.

## **Further information**

The course may not be included in a degree together with MOB103 Molecular Biology 15 credits.

## Subcourses in MOBA03, Molecular Biology

Applies from V14

- 0711 Theory and Essay, 11,0 hp  
Grading scale: Fail, Pass, Pass with distinction
- 0712 Laboratory Work and GMO-assignment, 4,0 hp  
Grading scale: Fail, Pass

Applies from H07

- 0701 Molecular Biology, 15,0 hp  
Grading scale: Fail, Pass, Pass with distinction