



- regulation, and genome stability.
- 2 Know and understand the structure and properties of DNA and RNA, and the molecular events involved in DNA synthesis, DNA repair and recombination, in pro- and eukaryotes.
  - 3 Know and understand the genetic information flow in the eukaryotic cell; including the definition of a gene, the replication, the formation of RNA (transcription), the processing of pre mRNA, and the protein synthesis (translation), the regulation of gene expression.
  - 4 Appreciate and understand the molecular biological concepts behind (simple) biotechnological applications.
  - 5 Be familiar with the specific terminology and able to explain major concepts to expert as well as layman's audiences.
  - 6 Be able to build further on current knowledge in the field by reading simple research papers and drawing relevant conclusions.

#### **Conditions for credit contract**

This course unit cannot be taken via a credit contract

#### **Conditions for exam contract**

This course unit cannot be taken via an exam contract

#### **Teaching methods**

Practicum, Group work, Lecture, Seminar: practical pc room classes

#### **Learning materials and price**

Lecture notes and handouts of the PowerPoint slides will be provided.  
Course book of the practical exercises will be available.

#### **References**

Molecular Biology of the Cell; B. Alberts, A. Johnson, J. Lewis, M. Raff, K. Roberts and P. Walter; Garland Science, New York.

#### **Course content-related study coaching**

Weekly office hours, during which the student can pass by for more information, will be announced at the beginning of the course.  
Feedback during permanent evaluation moments will be given.

#### **Assessment moments**

end-of-term and continuous assessment

#### **Examination methods in case of periodic assessment during the first examination period**

Written examination with open questions

#### **Examination methods in case of periodic assessment during the second examination period**

Written examination with open questions

#### **Examination methods in case of permanent assessment**

Report, Participation, Assignment

#### **Possibilities of retake in case of permanent assessment**

examination during the second examination period is not possible

#### **Extra information on the examination methods**

The final exam will evaluate the knowledge and understanding of major concepts in molecular biology via open questions as well as figure questions.  
The ability to connect major concepts will be assessed.  
The ability to use the correct terminology will be evaluated via short questions that ask for definitions or brief explanations of some important terms/concepts in molecular biology.

#### **Calculation of the examination mark**

Periodic evaluation = 16/20; non-periodic evaluation = 4/20  
Students need to attend the practical sessions in order to pass the course.  
Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.