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| **General Information** |
| **Course name and code** | **Model Organisms in Genetics****ÚBEV/MOG/03** | **ECTS Credits** | **5** |
| **Semester** | **2nd (Summer)Master & Doctoral Degree** |
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| **Aims** |
| To provide the students with an information on model systems of prokaryotic and eukaryotic organisms used in genetic research.  |
| **Contents** |
| Basic properties of model organisms used in genetics. Prokaryotic model systems (*Escherichia coli, Diplococcus pneumoniae, Agrobacterium tumefaciens and A. rhizogenes*). Model systems of simple eukaryotic organisms (*Saccharomyces cerevisiae, Neurospora crassa*). Plant and animal model systems *in vitro* and *in vivo*. *Caenorhabditis elegans. Arabidopsis thaliana*. Mendel´s laws. *Drosophila melanogaster.* Morgan´s rules. *Danio rerio*. *Mus musculus*. Human genome. Transgenic plants and animals. HeLa cells. Stem cells. Genetic importance of the study of twins. Genetic databases.**Prerequisities:** This course is an advanced course for students who have already passed **Genetics** and **Molecular Biology**. |
| **Assessment Methods and Criteria** |
| Protocols, oral examination.Grading Scale (in %): A ... 100 - 91%, B ... 90 - 81%, C ... 80 - 71%, D ... 70 - 61%, E ... 60 - 51%, Fx ... < 51%Grading System:The University recognises the following six degrees for the evaluation of the study results:a) A – excellent (excellent results) (numerical value 1) b) B – very good (above average results) (1.5) c) C – good (average results) (2) d) D – satisfactory (acceptable results) (2.5) e) E – sufficient (results meet the minimum criteria) (3) f) FX –failed (requires further work) (4) |
| **Bibliography** |
| Genetic periodicals, Internet sources. |