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| Georg-August-Universität Göttingen | | 6 C 6 WLH |
| Module M.iPAB.0001: Quantitative genetics and population genetics | | |
| Learning outcome, core skills: Advanced knowledge of the basic model of quantitative genetics, genetic effects and parameters, breeding values and variances. Similarity between relatives, inbreeding, crossbreeding and heterosis. Dynamics of genetic variability in limited populations. | | Workload: Attendance time: 84 h Self-study time: 96 h |
| Course: Quantitative genetics and population genetics (Lecture, Exercise) <i>Contents:</i> The genetic composition of a population in a single locus model, changes of gene and genotype frequencies, the polygenic model, components of phenotypic variance, relationship and inbreeding, heterosis and inbreeding depression, genetic drift, linkage disequilibrium, selection signatures. All contents are initially taught in theory and are consolidated in practical computer exercises (some with real data). Literature: Falconer & Mackay, Introduction to Quantitative Genetics (Prentice Hall), Lynch and Walsh, Genetics and Analysis of Quantitative Traits (Sinauer) | | 6 WLH |
| Examination: Written examination (90 minutes) Examination requirements: Advanced knowledge of the quantitative-genetic and population genetic basics of breeding, ability to apply appropriate methods to real data sets. Final exam with practical examination on computer. | | 6 C |
| Admission requirements: none | Recommended previous knowledge: Basic knowledge of plant and animal breeding | |
| Language: English | Person responsible for module: Prof. Dr. Henner Simianer | |
| Course frequency: each winter semester | Duration: 1 semester[s] | |
| Number of repeat examinations permitted: twice | Recommended semester: Master: 1 | |
| Maximum number of students: 20 | | |