Georg-August-Universität Göttingen **Module M.iPAB.0005: Poultry breeding and genetics**	6 C 4 WLH

Learning outcome, core skills: The module teaches substantiated and application-orientated understandings of the poultry breeding sector. The main organizational and technological elements of the current breeding programs as well as their optimization to future breeding challenges will be provided. Thereby, breeding strategies of relevant economic traits will be shown concentrating on the development of selection strategies to improve functional traits (adaption to climate, disease resistance, behavior, reproduction, product quality, metabolic dysfunction). Students will learn the application of quantitative and molecular genetic technologies for the applied research in poultry breeding.	**Workload:** Attendance time: 56 h Self-study time: 124 h

Course: Poultry breeding and genetics (Lecture, Excursion) *Contents*: • Structure, Organization and Economics of Poultry Breeding • Breeding Strategies for primary and functional traits in poultry and water fowl (genetics and breeding in reproduction, feed conversion, growth, product quality, immune system, disease resistance, behavior and well-being, environmentaladaption and metabolic stability). This includes particularly: • Methods of phenotyping and performance testing • Estimation of breeding values (conventional and genomic) • Selection index and BLUP • Genome-wide association studies (GWAS) and QTL mapping • Omics • Software application	4 WLH
Examination: Written examination (90 minutes) **Examination prerequisites:** Attendance to the mandatory excursion **Examination requirements:** Profound knowledge about applied poultry breeding.	6 C

Admission requirements: none	**Recommended previous knowledge:** Basics of animal breeding
Language: English	**Person responsible for module:** Dr. sc. agr. Ahmad Reza Sharifi
Course frequency: each winter semester	**Duration:** 1 semester[s]
Number of repeat examinations permitted: twice	**Recommended semester:**
Maximum number of students: 30	

Additional notes and regulations:
Attendance to the mandatory excursion.