Module number	**MM5**
Module name	**Genomics in research in industry**
Program of Study	MSc mandatory module
Offered	Once a year, winter semester
Module coordinator	Prof. Dr. Georg Thaller
Module advisor	Prof. Dr. Georg Thaller
Courses and teachers	**Seminar:** Genomics in research in industry (G. Thaller, C. Jung, K. H. Mühling, D. Cai) **Excursion:** Genomics in research in industry (G. Thaller, C. Jung, K. H. Mühling, D. Cai)
Prerequisites	Knowledge of the fundamentals of crop and animal breeding and applications of genomics in agriculture (according to the contents of the modules “Introduction to Crop and Animal Breeding” (MM4) and “Applications of Genomics in Agriculture” (MM5))
Language	English
Module capacity on campus students	20, Registration from September 1st to February 1st at the secretary’s office of the Animal Breeding and Husbandry Institute, CAU, Hermann-Rodewald-Str. 6, 1st floor, room 116
Module capacity off campus students	0
Course types (classroom/ total workload)	Seminar (30 h / 90 h) Excursion (30h / 90h)
Schedule	Seminar: weekly during the semester Excursion: block course during the semester
Grading	Seminar presentation: 50% (one of the teachers) Term paper: 50% (one of the teachers)
ID-card	Required for exams
European Credit Points	6
Module Objectives	The students learn and recognize how genomic information is generated at highly qualified research institutes on a large scale. They experience the application of genomic tools and techniques for enhancing novel breeding strategies on the industrial level that aim to improve crop and animal production. They are able to compare different approaches and to judge different procedures implemented in industry.
Contents	High throughput techniques for genotyping and proteomics, industrial standards, application of techniques in animal and plant breeding, processing of data in the context of genomics, proteomics, and metabolomics
Taught Skills	Methods and Application
Course materials	Announced at beginning of seminar – topic specific articles will be distributed