

Modulcode	AEF-agrig-003
number online registration	90300 with exam: 90310
Module number	MM3
Module name	Biochemistry and Proteomics
Module name - german	
Program of Study	M.Sc. mandatory module
Offered	Once a year, winter semester
Module coordinator	Prof. Dr. Karl H. Mühling
Module advisor	Prof. Dr. Karl H. Mühling
Courses and teachers	Lectures: Plant Biochemistry (K. H. Mühling) Lectures: Animal Biochemistry (S. Wolfram with S. Wein)
Prerequisites	none
Language	English
Module capacity on campus students	
Module capacity off campus students	5
Course types (classroom/ total workload)	Lecture (30h /90h), lecture (30h/90h)
Schedule	Weekly courses
Grading	Oral exam: 100% (K. H. Mühling, S. Wolfram)
ID-card	Required for exams
European Credit Points	6
Module Objectives	The students understand basic and specific biochemical and physiological principles in plants and animals. They can interpret complex situations with respect to metabolic consequences.
Contents	<u>Plant biochemistry:</u> assimilation of carbon, nitrogen and sulphur; biosynthesis of amino acids; biosynthesis, structure, sorting and modification of proteins; enzyme catalysis, regulation and kinetics; membrane proteins; transport of ions through plant membranes; plant proteomics <u>Animal biochemistry:</u> pH homeostasis; enzymes and coenzymes; bioenergetics; respiratory chain, tricarboxylic acid cycle; metabolism of carbohydrates, metabolism of lipids, metabolism of amino acids, peptides and proteins; metabolism of purines and pyrimidines; basics of endocrine regulation of metabolism
Taught Skills	Professional responsibility, key qualifications
Course Materials	to be announced at the beginning of the lecture