

Module: G6 Physics and Food Processing		
Exam: G6 Physics and Food Processing	LV.-No.:	ECTS-Points: 5 CP
Recommended Semester: 1st Semester	Module: Mandatory	Language: German
Responsible lecturer: Prof. Dr. Guido Ritter	Cycle: Winter Term	Registration information:
Lecturer in charge: Prof. Dr. Guido Ritter, Dipl.-Ing. Albrecht Fleischer		
Learning outcomes	Students are able to <ul style="list-style-type: none"> describe the basic physical and physico-chemical principles of food engineering processes name the most important process principles of food processing, processing, storage and packaging and their technical realization analyze the impacts of applied technologies, materials used and management methods used with regard to quality aspects, food hygiene issues and the protection of the environment capture elementary process parameters of food processing and to interpret the results in an application-friendly way. 	
Form of exam	Module exam: written exam (90 min)	
Form of teaching	<ul style="list-style-type: none"> Lecture Practical Training 	
Course contents	<p>Physics and Food Process Engineering (Lecture)</p> <ul style="list-style-type: none"> Introduction to food production Basic physical and processing parameters for substance characterization Mechanical and thermal processes of food production Techniques for the conversion of biological raw materials to consumer-friendly food Introduction to installation and equipment technology in the food industry Introduction to biotechnological processes Introduction to quality assurance Transport, storage and logistics Supply and disposal in the food industry Fundamental properties and principles of the suitability assessment of materials of food technology <p>Practical Training</p> <ul style="list-style-type: none"> Physical properties as a function of concentration and temperature, density, refractive index, viscosity, boiling temperature Characteristics of dispersed systems, impact volume and stability of foams, stability of emulsions Crushing and fractionating 	

Workload	Presence (4 SWS): Preparation and Follow-up: Sum:	60 h 90 h 150 h
Requirements	Proof of participation must be provided in the practical training and is a prerequisite for admission to the module exam.	
Literature	<ul style="list-style-type: none"> • Food processing in the household, aid info service • Internal laboratory regulations, such as „Leitfaden Küche“ and work instructions of the practical training 	