

# Studienplan Bachelor Life Sciences Engineering - 4 Studienrichtungen - Teilzeit

		Projekte der 4 Vertiefungen	Vertiefung Biotechnologie BT ●	Vertiefung Analytische und Bioanalytische Chemie CA ●	Vertiefung Technologie und Biotechnologie der Lebensmittel TA ●	Orientation Digital Life Sciences DLS	Spezialisierung DLS	Wahlpflichtmodule für die 4 Vertiefungen				
<b>Vollzeit</b> <b>8 Semester</b>	<b>Spezialisierung</b>	<b>BSc Thesis</b> 18 ECTS	Dual-Study: Biopharmaceutical Development and Production 4 ECTS	Dual-Study: Analytical science in industry: From raw material to final product 2 ECTS	Smart Food Processing 2 7 ECTS	Project: Process Design and Simulation 2 ECTS						
		<b>Projekt Life Sciences application</b> -Biotechnologie -Analytische und Bioanalytische Chemie -Lebensmitteltechnologie: Student Challenge/ Business Case - Digital Life Sciences 3 ECTS	Lab Biopharmaceutical Development and Manufacturing with Mammalian cells 3 ECTS	Lab project: Advanced Bio-analytics 3 ECTS	Claims Communication and Labelling 2 ECTS	Project: Process Analytical Technology (PAT) 2 ECTS	Industrial Purification of Biomolecules 2 2 ECTS	Chemometrics and Data Analysis 2 ECTS	Packaging 2 ECTS	Real-time Computation and Model Predictive Control 2 ECTS	OMICS 2 2 ECTS	ML/AI 2 2 ECTS
<b>Vollzeit</b> <b>7 Semester</b>	<b>Spezialisierung</b>	Bioprocess Engineering 2 4 ECTS	Bioanalytical Chemistry 5 ECTS	Health and Nutrition 2 ECTS	Choice specialisation: Ind. Purification of Biomolecules for DLS Automation in chemical analytics and engineering Smart Food Processing for DLS 4 ECTS		Biosensors Design and Applications (for BT, TA) 2 ECTS	Factory and Hygienic Design 2 ECTS				
		Lab Bioprocess and Fermentation 3 ECTS	Lab Bioanalytical Chemistry 6 ECTS	Food Safety and Quality 4 ECTS	Project: Industry Application 2 ECTS	DNA Sequencing in Life Sciences 2 ECTS	Flavour Technology and Sensory perception 2 ECTS					
		Biopharmaceutical Development and Manufacturing with Mammalian cells 4 ECTS	Method Development and Green Analytical Chemistry 3 ECTS	Smart Food Processing 1 10 ECTS	OMICS 1 2 ECTS	Industrial Enzymatic Bio-transformations for Sustainability 2 ECTS	Food Sensitivity and Toxicology 2 ECTS					
		Industrial Purification of Biomolecules 1 5 ECTS	Bioorganic Chemistry of Biomolecules 5 ECTS	Innovative Food Concepts 4 ECTS	ML/AI 1 2 ECTS	Chemistry of Biomolecules 2 ECTS	Consumer Research 2 ECTS					
		Lab Industrial Purification of Biomolecules 1 3 ECTS	Chemical Engineering 5 ECTS		Applied Statistics - Data Analysis and Time Series 4 ECTS	Applied Enzyme Technology 2 ECTS	Analytics of Food Products (for BT, CA) 2 ECTS					
		Biosafety and Validation of Production Plants 3 ECTS			Databases, Networks and HPC 5 ECTS	Measurement and Control Technology (for BT, CA, TA) 2 ECTS	Business Experience BEX en place de Innovation and 4 ECTS					
					Physical Computation Systems 4 ECTS							
<b>Vollzeit</b> <b>6 Semester</b>	<b>Spezialisierung</b>	Projektarbeit - BT: Projekt-Lab Molekularbiologie und Bioinformatik - CA: Projekt-Lab Organische Chemie und Analytik - TA: Projekt-Lab Lebensmittelchemie und -physik -DLS: Applied Statistics, Visualisation and Story telling 6 ECTS	Bioproszess-technik 1 und Labor 4 ECTS	Organische und Anorganische Chemie 5 ECTS	Nachhaltige Lebensmittel-Systeme 2 ECTS	Choice specialisation: Bioproszess-technik 1 und Labor Instrumentalanalytik 2 für DLS Lebensmittelwissenschaften und Technologien DL 4 ECTS						
		Zellbiologie und Immunologie 5 ECTS	Chemische Thermodynamik 2 ECTS	Lebensmittelwissenschaften und Technologien 5 ECTS	Low Code in Automation and Production 3 ECTS							
		Labor Bioanalytik 4 ECTS	Instrumentalanalytik 2 6 ECTS	Lebensmittel-Biotechnologie 4 ECTS	Numerical Methods and Simulation 4 ECTS	Sensorische Analyse 2 ECTS	Measurement, Control and Regulation 2 ECTS					
<b>Vollzeit</b> <b>5 Semester</b>	<b>Spezialisierung</b>	Industrielle Biotechnologie 3 ECTS	Organische Chemie 4 ECTS	Mikrobiologie und Foodomics 6 ECTS	Choice specialisation: Industrielle Biotechnologie Instrumentalanalytik 1 für DLS Lebensmittelchemie für DLS 3 ECTS							
		Biomoleküle und Diagnostik 4 ECTS	Instrumentalanalytik 1 7 ECTS	Lebensmittelchemie und -physik 5 ECTS	Starting with ML/AI 2 ECTS							
		Molekularbiologie 4 ECTS			Advanced Programming and Algorithms 3 ECTS	Operating Systems, Code and Computation 3 ECTS						
<b>Zweisprachiges Diplom wahlweise</b>	Projektmodule Spezifische Themen aus den Vertiefungen	3 Vertiefungen à 68 Credits, davon: 9 Credits Projektmodule 59 Credits Pflichtmodule inklusive* *4 Credits Wahlpflichtmodule für Technologie und Biotechnologie der Lebensmittel *2 Credits Wahlpflichtmodule für Biotechnologie, Analytische und Bioanalytische Chemie, Digital Life Sciences *11 ECTS for DLS specialisation. The specialisation (BT, CA, or TA) must be consistent throughout the curriculum.						Wahlpflichtmodule werden in Kooperation mit der School of Engineering und School of Management angeboten				