

Module title	1.5 Pathways to net zero GHG emissions in the food sector
Workload (ECTS)	3 ECTS
Module coordinator	
Contributing lecturers	<ul style="list-style-type: none"> • Sonja Schönberg • Prof. Dr. Sven Feuer • Prof. Dr. Christoph Denkel
Entry requirements	Builds on: <ul style="list-style-type: none"> • 0.3 Bridging Life Science • 4.4 Impact Assessment
Description	<p>Today's food industry is in the midst of a broad shift toward greater sustainability, with two trends in particular standing out: (a) shifting protein supply from animal protein-based to non-animal protein-based diets (non-animal protein sources: e.g., plants, algae, bioengineered proteins), (b) recycling and/or avoiding side streams of industrial food processing. In the wake of the global interdependencies of our economic systems revealed by the COVID pandemic, local material cycles are also coming into sharper focus, and may also be more sustainable.</p> <p>In this module we will look at possible actions and strategies to increase sustainability in the food sector and try to develop visions for the future. In doing so, we will get to know very different approaches that can be assigned to the above-mentioned trends - both on the level of production and on the level of processing as well as on the level of consumers. The focus will be less on subject-specific and more on methodological knowledge for the assessment and development of local material cycles.</p>
Learning outcomes and competences	<p>Competence</p> <p>Students</p> <ul style="list-style-type: none"> • will gain basic knowledge of the ways in which protein sources can be used for human nutrition or proteins can be made available. • will know the most important processes and mechanisms behind the individual strategies and will be able to evaluate and classify them with regard to the current state of research, feasibility, and impact on sustainability in the food sector, as well as place them in an overall context. • will be able to collaborate in a transdisciplinary manner with experts and stakeholders from different sectors in projects to develop sustainable production strategies. <p>Outcomes</p> <p>Students</p> <ul style="list-style-type: none"> • will be able to perform rudimentary analysis of existing processing strategies/chain and develop proposals for improvement. • will be able to develop proposals for local material cycles and production solutions, especially for urban areas.
Assessment of learning outcomes	<ul style="list-style-type: none"> • Written report
Didactic approach	<ul style="list-style-type: none"> • Contact teaching



	<ul style="list-style-type: none">• Self-study• individual and group exercises• coaching
Project-based learning	Project-based learning represents the central part of the module and is used to reflect on existing and develop new things.
Links to other modules	
Bibliography	Literature will be provided before the start of the module
Language	English
Location	TBD