

QUALIFICATION FRAMEWORK M.SC. BIOECONOMY

Required background	Course content	Competences and Levels		Learning Outcomes
Bachelor qualification in natural sciences, agricultural sciences or management and economics	<ol style="list-style-type: none"> Essential background knowledge and reasoning in the natural and agricultural sciences as well as management and economics Interdisciplinary approach to the systematic assessment of economic, social, ecological and technical aspects of (new) biobased products and services. The complete life cycle is analysed through biobased value chains and nets (life-cycle thinking), with a focus on <ul style="list-style-type: none"> the sustainable production and use of biological resources, their properties, and techniques for their conversion and further processing, economic assessment up to marketing and consumer behaviour with regard to biobased products and services, from the perspective of primary producers, processing industries, service providers and consumers. Tools for inter- und transdisciplinary cooperation. Specialization in one of the three bioeconomy disciplines: natural sciences, agricultural sciences or management and economics 	Disciplinary Competence (vertical bar of the T-profile)	Knowledge and understanding	Graduates have <ul style="list-style-type: none"> a solid background in the natural and agricultural sciences and management and economics with respect to the bioeconomy in-depth knowledge, depending on their specialization, in one of the following disciplines: natural sciences, agricultural sciences or management and economics
			Knowledge and understanding	Graduates <ul style="list-style-type: none"> are familiar with the paradigm of biobased value chains and nets. have developed a systematic overview of the interconnections and dependencies of the various sub-areas of the bioeconomy and are aware of the particular characteristics of this complex system.
			Application	Graduates are able to <ul style="list-style-type: none"> implement projects within their discipline using an inter- and transdisciplinary approach and establish possibilities within these projects to connect them to adjoining disciplines. apply their expertise in projects outside of their own discipline that use biobased value chains and nets, taking into account the various sub-areas of the bioeconomy and their appropriate demands. design and coordinate bioeconomic projects using an inter- and transdisciplinary approach. effectively communicate across disciplinary boundaries.
		Inter- and transdisciplinary competence (horizontal bar of the T-profile)	Analysis and synthesis	Graduates are able to <ul style="list-style-type: none"> analyse and compare existing economic structures and production processes within biobased value chains and nets. analyse the given political framework of biobased value chains and nets. evaluate and perform exact calculations of the (economic) costs and (societal) benefits of new biobased products with the most appropriate methods. evaluate products and services on the basis of their complete life cycle, understand how individual processes form part of a larger system and analyse how they impact the system as a whole perform empirical assessments of the acceptance of biobased products and services as well as consumer willingness to contribute to environmental improvement through a biobased economy. devise models for the optimal utilization of renewable natural resources and develop strategies for their implementation.
			Creativity	Graduates are able to <ul style="list-style-type: none"> employ strategies to effectively and appropriately engage with stakeholders. They can determine which approach fits a given situation in order to attain common goals. conceptualize bioeconomic activities, determine the criteria for their success, and also plan and supervise their implementation. develop sustainable resource strategies. develop new biobased products, or actively participate in their development, based on sound cost-benefit analyses. contribute to the creation of structures and parameters that enable the establishment of biobased value chains and nets.