



UNIVERSITY OF
HOHENHEIM

MASTER'S PROGRAM IN BIOECONOMY

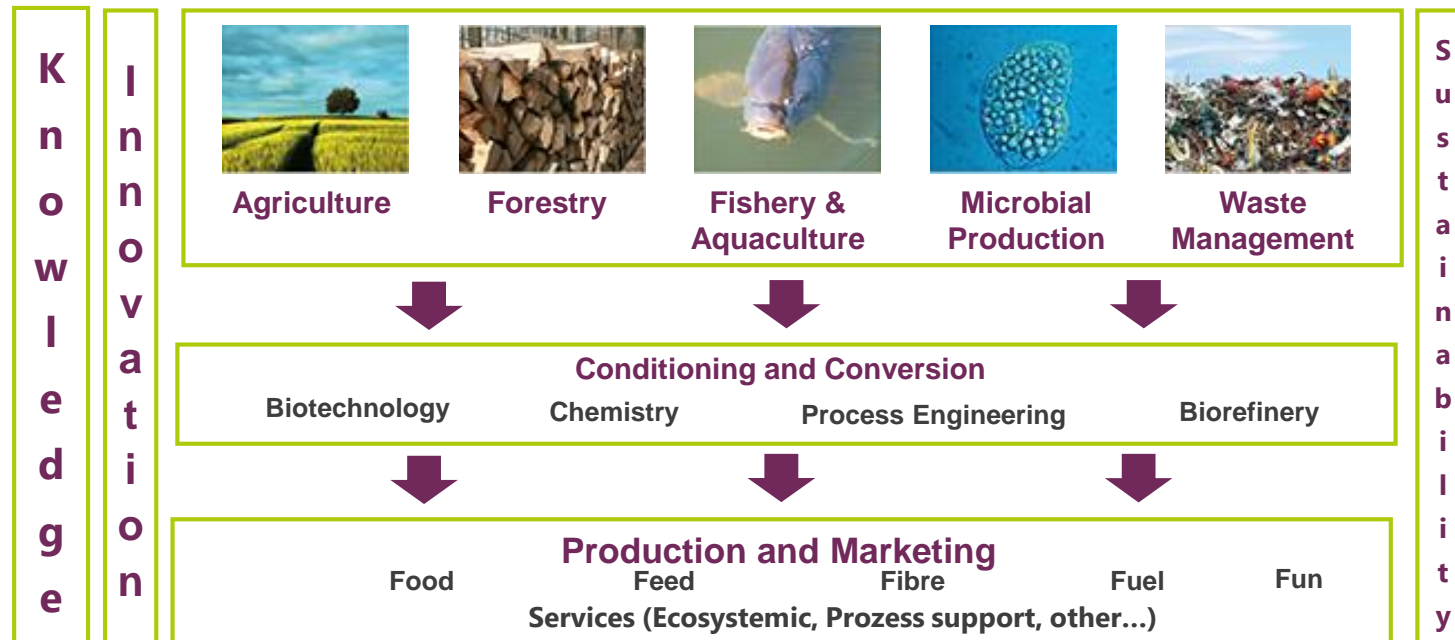
Speakers: Prof. Lewandowski & Svenja Schuhmacher

AGENDA

1. What is bioeconomy?
2. Bioeconomy at the University of Hohenheim
3. Master's Program in Bioeconomy

WHAT IS BIOECONOMY?

“Bioeconomy is the knowledge-based production and use of **biological resources** to provide products, processes and services in all economic sectors within the frame of a **sustainable economic system**”.*



* Definition of the Bioeconomy Council Germany / Bioökonomierat (BÖR);
Figure adapted from European Commission 2006

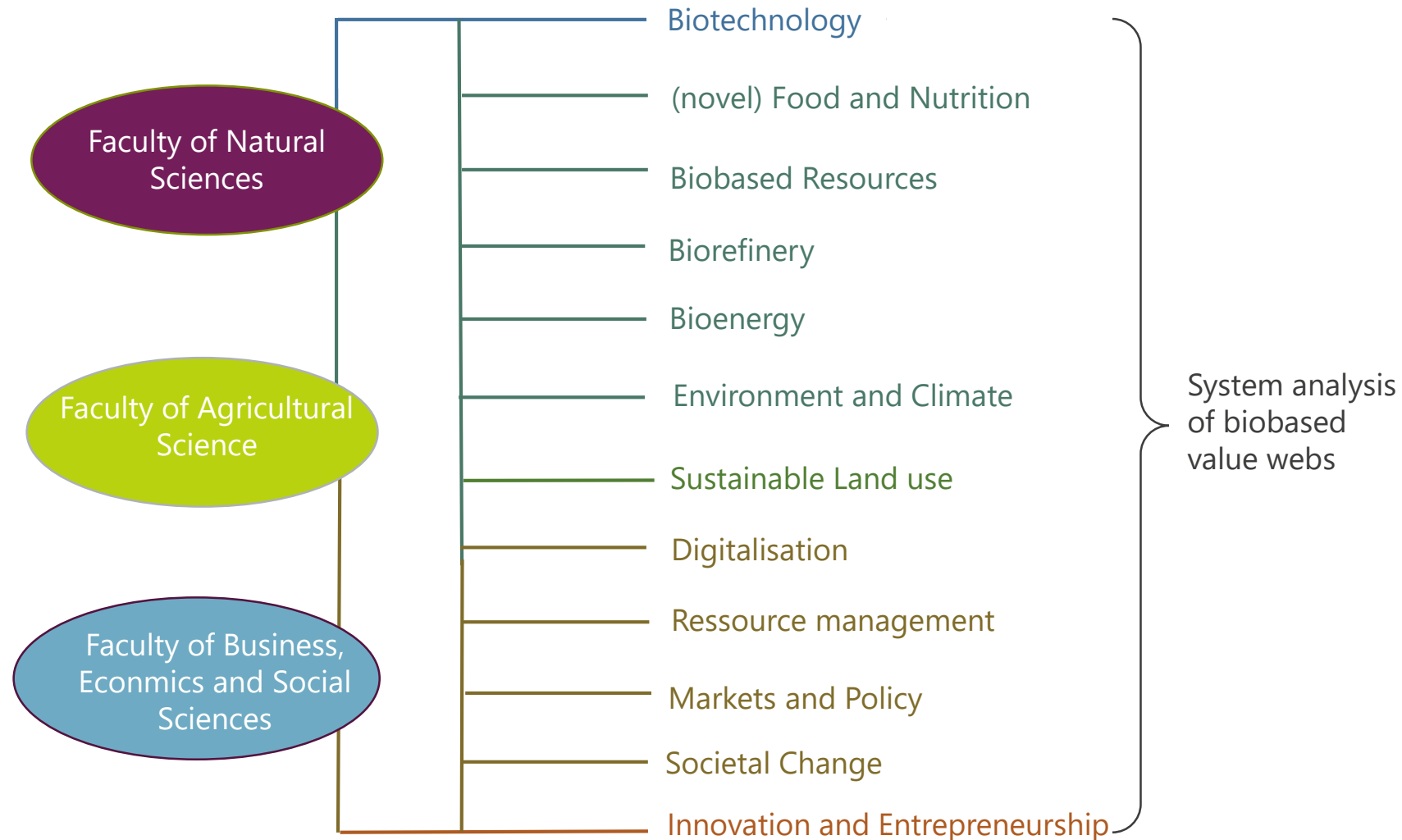
AIMS OF THE BIOECONOMY

Shift from a fossil-fuel-based economy towards an economy based on renewable and sustainable resources including the following overarching aims:

- Securing worldwide food supply
- Producing healthy and safe food
- Creating sustainable agricultural production
- Expanding energy carriers based on biomass
- Using renewable resources industrially
- Driving societal transformation to a sustainable economy

Scientific disciplines, political and economic actors must work together to create necessary innovation and to drive the transformation

BIOECONOMY AT THE UNIVERSITY OF HOHENHEIM




BIOECONOMY AT THE UNIVERSITY OF HOHENHEIM

Hohenheim Research Centers


 Bioeconomy  Global Food Security and Ecosystems  Health Sciences


 Chief Bioeconomy Officer (CBO) Iris Lewandowski  Bioeconomy Lab

  Agricultural Research Stations
Biorefinery and Food Technology Centers
Research and Educational Laboratories 

 Study Programs

Biobased Products and Bioenergy **Bioeconomy** Earth and Climate System Science

Agricultural Sciences, Food Biotechnology, Food Science and Engineering, Food Systems 

Public Relation 

Consulting
Baden-Württemberg
German Government 

International  





**Resource
Production**



Properties



Conversion



**Biobased
Products**



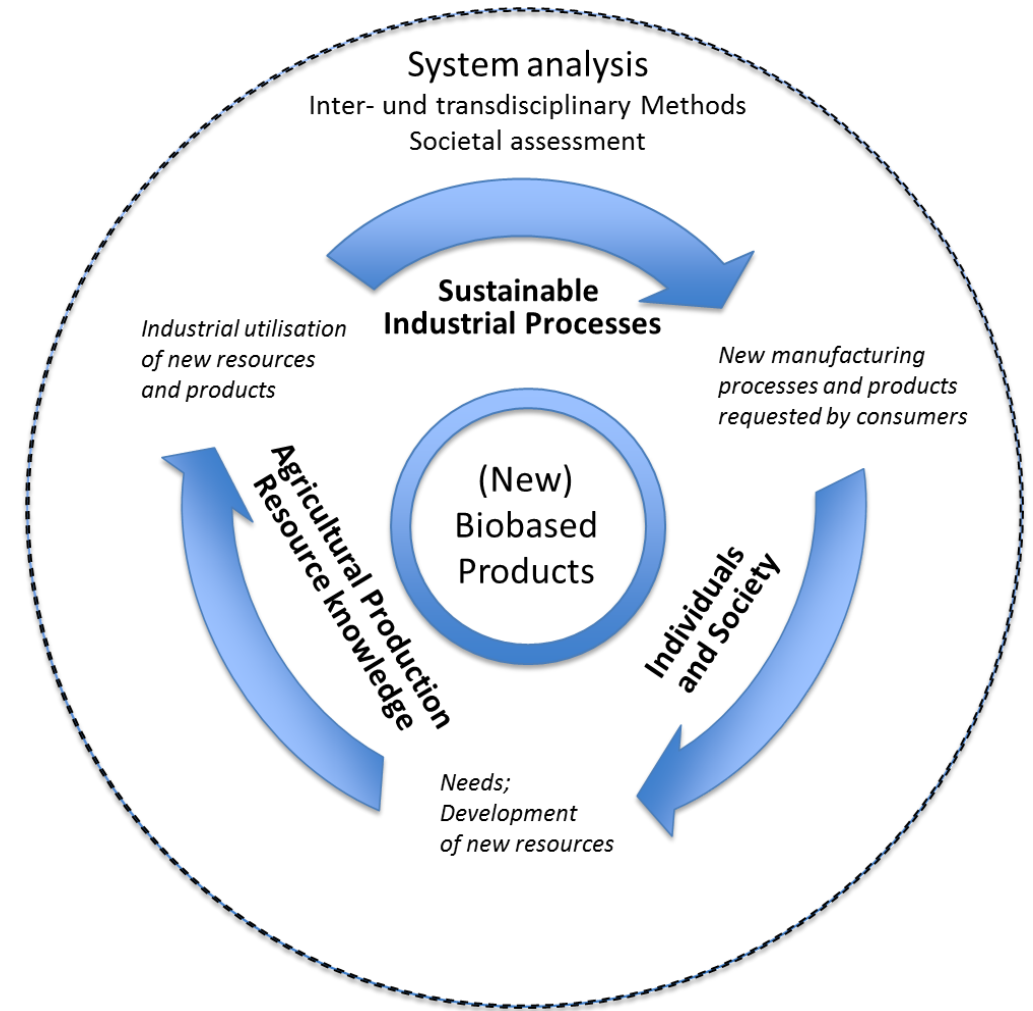
**Market
introduction**

Inter- and transdisciplinary analysis and assessment of biobased value chains

...from each of the following perspectives:

- Companies that focus on new biobased resources, processes and products;
- Established producers seeking to introduce renewable resources, biotechnological processes and their corresponding products onto the market;
- Actors attempting to gauge the need and acceptance of such products;
- Organizations that support the development of biobased value chains, e. g. through research and advisory services.

MASTER'S PROGRAM IN BIOECONOMY



QUALIFICATION PROFILE



T - Profile

Systematic, integrative and participative approaches

Disciplinary expertise

CURRICULUM

	1st semester	2nd semester	3rd semester	4th semester
Compulsory modules	Inter- and Transdisciplinary Research Approaches	Sustainable Industrial Processes	Elective Modules	Master's thesis
Bridge modules	Properties of Biobased Resources and Products	Farm Economics & Value Chain Development		
	Agricultural Production of Biobased Resources	Economic Policy Analysis of the Bioeconomy		
Elective modules	Economics and Management	Projects in Bioeconomic Research		
	Natural Science Concepts	Life-cycle Sustainability Assessment		
	Bioeconomy Discourses			

EBU label



CURRICULUM

	1st semester	2nd semester	3rd semester	4th semester
Compulsory modules	Inter- and Transdisciplinary Research Approaches	Sustainable Industrial Processes	Profiles: <ul style="list-style-type: none"> • Bioeconomy policy analysis • Sustainable biomass production systems • Sustainability assessment in the bioeconomy • Innovation and entrepreneurship in the bioeconomy • Transforming food systems within the bioeconomy • Data Science and artificial intelligence in the bioeconomy 	
Bridge modules	Properties of Biobased Resources and Products	Farm Economics & Value Chain Development		
	Agricultural Production of Biobased Resources	Economic Policy Analysis of the Bioeconomy		
Elective modules	Economics and Management	Projects in Bioeconomic Research		
	Natural Science Concepts	Life-cycle Sustainability Assessment		
	Bioeconomy Discourses			

TEXTBOOK



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Open Access

Bioeconomy

Shaping the Transition to a Sustainable, Biobased Economy

Herausgeber: **Lewandowski, Iris** (Ed.)

More information:

www.uni-hohenheim.de/bioeconomy

“HOHENHEIM BIOECONOMISTS” ARE ABLE TO:

- **Apply a value chain perspective**

- plan, assess and analyze production and processing of renewable resources across all sectors
- coordinate production of biobased products in a locally-adapted way

- **Determine and use appropriate technologies and processes**

- understand key technologies and advance their economic use
- consider interdependencies of biomass utilisation pathways

- **Consider ecological, societal and economical requirements**

- consider growing societal requirements for biobased products and production methods
- organize the market launch of new biobased products
- understand the embeddedness of (new) biobased products in value chains from micro- and macroeconomic perspectives
- consult on sustainable solutions balancing ecological, societal and economic requirements

- **Set up general conditions and institutional frameworks**

- coordinate cooperation of different stakeholders in the development of biobased value chains
- promote the establishment of adequate institutional and policy frameworks, e.g. standards for sustainability in resource production



CAREER PROSPECTS

● Private sector

- Companies that produce products based on
 - Biological resources and
 - Biotechnological processese. g. food, biobased consumer products and bioenergy
- Professional positions in production, marketing, sustainability and innovation management and research & development
- Project management positions

● Start-ups

- Entrepreneur: starting an own company

● Research and Development

- Public sector research organisations, including Universities, at national and international level in the field of the bioeconomy
- Organisations that support biobased value chains (including consulting companies and financial organisations)

● Public Sector

- Ministries and agencies that support the bioeconomy
- International organisations that support the bioeconomy (including international development organisations)



APPLICATION AND ADMISSION

- **Application deadline: June 15**
- **Number of places: unlimited**
- **Open for students with a degree in either:**
 - Natural Sciences or Engineering
 - Agricultural, Horticultural or Forestry Science
 - Social, Economic or Business Sciences

APPLICATION AND ADMISSION

- **Admission requirements:**
 - A degree (minimum 3 years of study) from a German or foreign university or an equivalent academic qualification
 - English skills (e.g. internet-based TOEFL 90 points)
- **Selection criteria:** A seat is guaranteed to all those who meet the entry requirements!

FIVE REASONS TO STUDY BIOECONOMY AT HOHENHEIM

1. Unique and innovative study programme that
2. addresses the fundamental challenges of the 21st century
3. Has an international perspective on bioeconomy
4. T-shaped qualification profile
 - Combining specialist knowledge with the abilities to collaborate across disciplines and sectors and to shape the transformation to a sustainable economy
5. Manifold career prospects in all bioeconomy-related fields



**CHANGE
THE
SYSTEM.
SHAPE
THE
FUTURE.**

Further information:
[www.uni-hohenheim.de/en/
bioeconomy-masters](http://www.uni-hohenheim.de/en/bioeconomy-masters)