



UNIVERSITY OF  
HOHENHEIM

Interdisciplinary Program

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



As of Winter Semester 2018/19

Curriculum

**Bioeconomy**

Master of Science

[natur.uni-hohenheim.de](http://natur.uni-hohenheim.de)

Dear students

This curriculum provides you with comprehensive information on the Master's program in Bioeconomy. It contains information on the course structure and summarizes the most important examination regulations.

The information presented here reflects the current situation. Titles and contents of modules are however changed from time to time. For administrative reasons, there is often a delay before these changes appear in printed materials. Therefore, the correctness of the information provided in this brochure cannot be guaranteed.

If in doubt, please contact the program coordinator, Ms. Svenja Pittroff, to obtain most recent information. You can find up-to-date module descriptions in the online module catalogue at **[www.uni-hohenheim.de/module-catalogue](http://www.uni-hohenheim.de/module-catalogue)**. Time schedules and lecture halls of all courses are displayed in the the University of Hohenheim's course catalogue, available at the beginning of each semester at **[www.uni-hohenheim.de/coursecatalogue](http://www.uni-hohenheim.de/coursecatalogue)**.

We hope you enjoy your time at the University of Hohenheim and wish you all the best for your studies!

Faculty of Agricultural Science

Faculty of Natural Sciences

Faculty of Business, Economics and Social Sciences

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## The Master's program in *Bioeconomy*

### **Program objectives**

The Master's program in Bioeconomy offers a comprehensive and systematic overview of all aspects of the production of (new) biobased products. In this program, you will examine all aspects of renewable resources in the biobased value chain: their production and utilization in agricultural ecosystems in diverse climatic regions, their ecological performance, their properties, means of conservation, and biotechnological and sustainable industrial processes to convert these resources into (new) biobased products. In addition, you will consider the potential market launch of these innovations on an individual and societal basis.

As an interdisciplinary program jointly offered by Hohenheim's three faculties, it enables a systemic analysis of the entire biobased value chain. Consequently, you will acquire the expertise necessary to consider a range of issues in this complex field from the perspectives of producers of new resources and products; of those already producing and seeking to introduce renewable resources and their corresponding products onto the market; and of those trying to gauge the need and acceptance of such products. This reconciliation of varying interests is one of the strengths of this program and its graduates.

### **Program design**

During the first year of the program, you are expected to acquire fundamental knowledge of all aspects of the bioeconomy, including their interconnections and interdependencies. Three semi-elective modules are offered in the first semester, which introduce the basic concepts of the agricultural, natural or economic sciences, respectively. This allows you to complement your academic background with the qualifications necessary to successfully complete this interdisciplinary program. Beyond that, you will acquire the knowledge and methods necessary for a systematic analysis of biobased economies in several compulsory modules. Topics range from a natural and agricultural scientific study of the properties of biobased resources to the economic analysis and optimisation of production and processing across the entire biobased value chain.

The second year of studies gives you the opportunity to design your own curriculum by choosing from a range of elective modules and specialising in your preferred areas of the field. In the module "Projects in Bioeconomic Research" you put your acquired skills into practice in cooperation with industry or other organisations by tracing a specific product from inception to market launch in a systematic examination of the entire biobased value chain. You complete the program by writing a research-intensive Master's thesis in the fourth semester.

**Course of study**

Recommended course of study:

	1st semester	2nd semester	3rd semester	4th semester
6 credits	Inter- and Transdisciplinary Research Approaches in Bioeconomy (4301-420)	Sustainable Industrial Processes (1510-410)	Elective modules (36 credits)	Master's thesis (30 credits)
6 credits	Properties of Biobased Resources and Products (3701-470)	Farm Economics and Strategic Management in the Bioeconomy (4101-430)		
6 credits	Agricultural Production of Biobased Resources (3403-430)	Markets, Innovation and Social Acceptance of Biobased Products (5000-510)		
6 credits	Economics and Management (5205-410)	Projects in Bioeconomic Research – Group Project (4903-410)		
6 credits	Natural Science Concepts (1507-400)			

- compulsory modules
- semi-elective modules
- elective modules

**Module structure**

There are three types of modules – compulsory, semi-elective and elective modules – which are described in detail on the following pages.

Modules offered at the University of Hohenheim can be either blocked (in the form of four-week compact courses) or non-block (running the entire duration of the lecture period). All compulsory modules are non-block modules and last the entire semester. Elective modules however *can* be blocked but may also be offered as non-block modules. Please note that for most modules registration is necessary.

Detailed information on individual modules, their corresponding courses, the current state of modules on offer, as well as information on how to register for modules may be obtained at [www.uni-hohenheim.de/module-catalogue/bioeconomy](http://www.uni-hohenheim.de/module-catalogue/bioeconomy).

A tool for composing individual timetables is available on the intranet at [www.uni-hohenheim.de/schedule](http://www.uni-hohenheim.de/schedule). Please note: non-block modules in particular often consist of more than one course!

### **Compulsory modules**

All students must complete a minimum of 42 credits from compulsory modules as well as the Master's thesis (minimum 30 credits). The compulsory modules are:

Semester	Code	Module title	Credits	Professor
1st	3701-470	Properties of Biobased Resources and Products	6	Zörb
1st	4301-420	Inter- and Transdisciplinary Research Approaches in Bioeconomy	6	Knierim
2nd	1510-410	Sustainable Industrial Processes	6	Hausmann
2nd	4101-430	Farm Economics and Strategic Management in the Bioeconomy	6	Lippert
2nd	5000-510	Markets, Innovation and Social Acceptance of Biobased Products	6	Ahlheim
2nd	4903-410	Projects in Bioeconomic Research	6	Hinrichs

### **Semi-elective modules**

All students require a minimum of 12 credits from semi-elective modules. These modules impart basic knowledge in the agricultural, natural and economics sciences and are intended to bridge knowledge gaps in the basic processes of the bioeconomy that students from different academic backgrounds may have. Depending on your previous education, you may replace one semi-elective module with an elective module.

If you have a **Bachelor's degree in economics**, you must take the following modules and may replace the module "Economics and Management" with an elective module:

Semester	Code	Module title	Credits	Professor
1st	3403-430	Agricultural Production of Biobased Resources	6	Lewandowski
1st	1507-400	Natural Science Concepts	6	Weiss

If you have a **Bachelor's degree in natural sciences**, you must take the following modules and may replace the module "Natural Science Concepts" with an elective module:

Semester	Code	Module title	Credits	Professor
1st	3403-430	Agricultural Production of Biobased Resources	6	Lewandowski
1st	5205-410	Economics and Management	6	Jung

If you have a **Bachelor’s degree in agricultural sciences**, you must take the following modules and may replace the module “Agricultural Production of Biobased Resources” with an elective module:

Semester	Code	Module title	Credits	Professor
1st	5205-410	Economics and Management	6	Jung
1st	1507-400	Natural Science Concepts	6	Weiss

***Elective modules***

In addition to compulsory and semi-elective modules, you need a minimum of 30 credits from elective modules. Elective modules provide you with the opportunity to specialize in an area that corresponds to your personal and professional interests.

A comprehensive list of all elective modules recommended for the Master’s program in Bioeconomy may be found online at **[www.uni-hohenheim.de/module-catalogue/bioeconomy](http://www.uni-hohenheim.de/module-catalogue/bioeconomy)**.

In addition, elective modules can be selected from other Master’s programs offered at the University of Hohenheim or from Master’s programs offered at other German or foreign universities. You need to apply to the examinations board to have such modules counted.

Information on all modules offered at the University of Hohenheim is available online at **[www.uni-hohenheim.de/module-catalogue](http://www.uni-hohenheim.de/module-catalogue)**.

***Master’s thesis***

The Master’s thesis is intended to show that you are able to work independently on a topic in the field of the bioeconomy within a fixed period of time by applying scientific methods. Thesis work includes a literature review, compilation of new and original data derived from either field or laboratory work or a systems analysis and modelling as well as a period of write-up.

The Master’s thesis examination consists of a written part (thesis) as described above and, if applicable, an oral defense (colloquium). Whether a colloquium is part of the Master’s thesis or not is decided by your supervisor. In the colloquium, you must defend the essential arguments, methods and results of your thesis. The colloquium lasts approximately 30-45 minutes. The written part of the Master’s thesis has to be completed within a period of six months. It is usually written during the fourth semester. The Master’s thesis can be carried out either at the University of Hohenheim or at one of our partner universities.

**Credit points** You earn credits for each completed module. In order to complete a module, you need to pass the module examination as explained on the following pages.

The Master's program requires a minimum total of 120 credits. The credit point system used at the University of Hohenheim corresponds to the European Credit Transfer System (ECTS).

**Examinations** Every module of the Master's program in Bioeconomy is completed with an examination. Types of examinations offered at the University of Hohenheim include written and oral examinations, protocols of practical courses, reports, preparation and presentation of contributions to seminars, and colloquia.

For every examination you decide to take, you need to register online through *Studium Online* at **[www.uhoh.de/studiumonline](http://www.uhoh.de/studiumonline)** during the exam registration period. Once a registration for a module examination has been completed, the module can no longer be dropped from your course of study and the examination is obligatory.

Coursework may be a prerequisite for taking a module examination. Please see the module description at **[www.uni-hohenheim.de/module-catalogue](http://www.uni-hohenheim.de/module-catalogue)** for detailed information on the specific requirements for individual examinations.

Detailed information on the valid examination regulations, deadlines, examination dates, your transcript of records, etc. may be obtained from the examinations office or online at **[www.uni-hohenheim.de/exams](http://www.uni-hohenheim.de/exams)**.

***Examinations of non-block modules***

Examinations of non-block modules are usually held in two examination periods that follow the lecture period (see page 8). For the current exam registration periods, please see **[www.uni-hohenheim.de/semesterdates](http://www.uni-hohenheim.de/semesterdates)**. You may choose whether to take the examination in the first or second examination period. If you decide to withdraw from an examination you have previously registered for, you are automatically registered for the following examination date. If you are not notified of the date, please contact the examinations office or the professor in charge of the module.

***Examinations of block modules***

Examinations of blocked modules are usually held at the end of the respective block. For blocked modules, registration must be completed at the latest seven days before the examination takes place. If you decide to withdraw from an examination you have previously registered for, you are automatically registered for the following examination date. If you are not notified of the date,



please contact the examinations office or the professor in charge of the module.

**Examination resits**

It is possible to resit an examination twice for a total of five modules (compulsory, semi-elective or elective). For all other modules, it is possible to resit the examination once. It is not possible to resit an examination which has already been passed.

If you fail an examination, you are notified by the examinations office in writing, usually with the resit date for which you are automatically registered. Examination resits for non-block modules are usually scheduled for the following examination period. Examination resits for blocked modules take place either in the following examination period or are scheduled by the professor in charge. In some cases, the resit date has not been set at the time of notification. If this is the case, please check the resit dates with the professor or the examinations office.

**Grades**

The examination result is expressed in grades according to the grading table below. A minimum grade score of 4.0 (D) is required to pass and complete the module. Some modules are not graded but are assessed as either “pass” or “fail”. These modules do not contribute to the overall grade.

Grades			
<i>very good</i>	1.0	A	<i>excellent performance</i>
	1.3	A-	
<i>good</i>	1.7	B+	<i>above-average performance</i>
	2.0	B	
	2.3	B-	
<i>satisfactory</i>	2.7	C+	<i>average performance</i>
	3.0	C	
	3.3	C-	
<i>pass</i>	3.7	D+	<i>performance meeting minimum criteria</i>
	4.0	D	
<i>fail</i>	5.0	F	<i>performance not meeting minimum criteria</i>

**Overall grade**

The overall grade for the Master’s program in Bioeconomy is calculated as the weighted average of all grade scores achieved in all modules, including the Master’s thesis. The module grades and the grade of the Master’s thesis are weighted on the basis of the credits awarded for each completed module. The result is rounded mathematically to one decimal place. Results above 4.0 (D) are always rounded up to 5.0 (F).

***Cheating and plagiarism***

If you attempt to influence the result of an examination by cheating or using forbidden aids, the examination is assessed as “fail” (5.0). This expressly includes plagiarism, i.e. the use of content taken from the internet or other sources without properly quoting or indicating the source.

Teaching staff may require you to attach a declaration of authorship to written examinations or assignments. They may require you to submit written examinations or assignments in digital form. Please ask the appropriate supervisor before submitting your work.

Please note: a declaration of authorship must always be included with written assignments in the module “Projects in Bioeconomic Research”.

The rules for submitting your Master’s thesis are as follows, regardless of your supervisor: Two bound copies of the Master’s thesis are to be submitted to the examinations office before the deadline. In addition, the thesis is to be submitted on a digital medium (CD/DVD) for further examination purposes. In addition to these documents, you must submit a written declaration of authorship, stating that you are the sole author of the submitted work and that all sources and aids have been indicated as such.

**Studying abroad and recognition of credits**

Students may spend one semester of the second year abroad to gain additional experience and enhance their professional profile. Credits obtained at another university during an exchange period can be recognized by the University of Hohenheim and thus contribute towards your degree, provided the awarding institution is equivalent to a German university and the competencies acquired do not exhibit substantial differences to those of the Bioeconomy program as a whole.

**Degree**

Upon successful completion of all modules including the Master’s thesis, you are awarded the degree of Master of Science (M.Sc.). This degree renders you eligible to pursue a doctorate.

**Course evaluations**

The quality of courses and modules is evaluated by the students of all study programs on a one- or two-year basis, depending on the faculty administering the module. These evaluations are always anonymous. The lecturers are notified of the results and asked to discuss them with the students at the end of their course or module.

**Semester dates**

Please note: The last block period of each semester overlaps with the first examination period of the non-block modules!

For up-to-date information on the semester dates, please see [www.uni-hohenheim.de/semesterdates](http://www.uni-hohenheim.de/semesterdates).

**Teaching staff**

Professors at the University of Hohenheim have extensive experience in international research. Students also benefit from Hohenheim's active links with academic partners worldwide. Guest speakers from partner universities as well as research, development and policy institutions cover additional topics and enrich the curriculum.

The following professors offer compulsory and semi-elective modules and are thus closely linked to the Master's program in Bioeconomy. However, if you have any questions about the program, it is best to contact Ms. Svenja Pittroff at [bioeconomy@uni-hohenheim.de](mailto:bioeconomy@uni-hohenheim.de).

***Faculty of Agricultural Sciences***

- **Prof. Dr. Regina Birner**, Institute of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Department of Social and Institutional Change in Agricultural Development (490c)
- **Prof. Dr. Andrea Knierim**, Institute of Social Sciences in Agriculture, Department of Rural Sociology (430a)
- **Prof. Dr. Iris Lewandowski**, Institute of Crop Science, Department of Biobased Products and Energy Crops (340b)
- **Prof. Dr. Christian Lippert**, Institute of Farm Management, Production Theory and Resource Economics (410a)
- **Prof. Dr. Christian Zörb**, Institute of Crop Science, Quality of plant products (340e)

***Faculty of Natural Sciences***

- **Prof. Dr. Rudolf Hausmann**, Institute of Food Science and Biotechnology, Department of Bioprocess Engineering (150k)
- **Prof. Dr. Jörg Hinrichs**, Institute of Food Science and Biotechnology, Department of Dairy Science and Technology (150e)
- **Prof. Dr. Jochen Weiss**, Institute of Food Science and Biotechnology, Department of Food Structure and Functionality Laboratories (150g)

### ***Faculty of Business, Economics and Social Sciences***

- **Prof. Dr. Michael Ahlheim**, Institute of Economics, Department of Economics, esp. Environmental Economics and Regulatory Policy (520F)
- **Prof. Dr. Benjamin Jung**, Institute of Economics, Department of Economics, esp. International Economics (520E)

## **FAQ**

### ***Who can I contact with questions regarding my studies?***

Your first point of contact is Ms. Svenja Pittroff, coordinator of the Master's program in Bioeconomy. Her contact information is on the first page of this curriculum.

### ***I want to go abroad. What do I have to do?***

The Office of International Affairs (AA) is happy to provide you with information and will guide you through the process of organising a stay abroad. For detailed information, please visit their website at [www.uhoh.de/aaa](http://www.uhoh.de/aaa).

### ***I have completed all modules required for my degree, what happens now?***

Once you have successfully completed all required modules, you will be issued your degree certificate. However, please keep the following in mind:

- Your degree certificate cannot be issued until you have completed all exams and all of your grades have been entered into the system. Once all grades have been entered into the system, you may exmatriculate yourself and do not need to re-register for the following semester. If you exmatriculate or forego re-registration before all grades have been entered into the system, your studies are considered to have ended prematurely with exams either not taken or not entered into the system.
- If you re-register due to missing entries in the system, you do not have to pay the semester fees.

**University of Hohenheim**

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