



## Master Program Biomass Technologie

**Section 43 (FPSO biomass technology program regulations of TUM):**

20 Credits in the elective modules (or lectures) of category 1.

48 Credits in the elective modules (or lectures) of category 2.

19 Credits in the elective modules (or lectures) of category 3.

3 Credits – general electives.

+ 30 Credits Master's Thesis

120 Credits for graduation

When choosing the module, Section 8 (2) (APSO regulations of TUM) must be observed.



**Joint Degree Program**  
**Technische Universität München TUM – Universität für Bodenkultur BOKU Wien**

TUM Campus Straubing for Biotechnology and Sustainability

Masterstudiengang – *Master Program*  
Biomassetechnologie – *Biomass Technology*

Der Studiengang ist nur in englischer Sprache studierbar  
*The lectures of the program will be read in English language*

- **Master's Thesis needs to be supervised by two supervisors  
(1 BOKU - 1 TUMCS)**
- **One Semester exchange – means at least *30 Credits* need to be collected at  
the partner university in an exchange semester**

Elective modules or lectures of category 1 worth at least **20 credits** must be completed from the following list:

CS0071	<b>Material Flow Analysis and Life Cycle Assessment</b>	6	SuSe
CS0101	<b>Renewables Utilization</b>	5	WiSe
CS0136	<b>Energetic Use of Biomass and Residuals</b>	6	SuSe
CS0254	<b>Introduction to Economics of Renewable Resources</b>	5	WiSe
CS0013BOK	<b>Chemistry and Technology of Sustainable Resources</b>	2	WiSe
CS0014BOK	<b>Post-harvest Technology</b>	2	WiSe
CS0015BOK	<b>Gender, Food Systems and Natural Resources</b>	6	WiSe
CS0016BOK	<b>Aspects of Product Quality in Plant Production</b>	4	WiSe
CS0017BOK	<b>Plant and Environment</b>	3	WiSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

**CS####**

**Module Number TUMCS  
(TUMonline)**

**CS####BOK  
Lectures in Vienna**

**A minimum of one category  
1 module must be  
successfully passed until the  
end of semester 2**

## Category 2: Specialization - Production and Provision of Biogenic Raw Materials

A total of **four specializations** must be selected and at least **12 credits** must be acquired in each of these. A total of at least **48 credits** must be earned in this category 2.

CS0018BOK	<b>Soil Protection</b>	2	SuSe
CS0020BOK	<b>Agricultural Engineering in Plant Production</b>	3	SuSe
CS0021BOK	<b>Crop Production Systems in Organic Agriculture</b>	2	WiSe
CS0044BOK	<b>Procedures of Plant Production in Organic Agriculture I</b>	1	WiSe
CS0045BOK	<b>Global Waste Management I</b>	2	WiSe
CS0046BOK	<b>Waste Management Seminar</b>	3	WiSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

**CS####  
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## Category 2: Specialization – Chemical-Material Use

A total of **four specializations** must be selected and at least **12 credits** must be acquired in each of these. A total of at least **48 credits** must be earned in this category 2.

CS0003	Production of Renewable Fuels	5	WiSe
CS0265	Biorefinery	5	WiSe
CS0266	Sustainable Chemistry	5	SuSe
CS0022BOK	Processes in Enzyme Technology	2	WiSe
CS0023BOK	Biochemical Technology	2	SuSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

**CS####**

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**CS####BOK**

**Lectures in Vienna**

## Category 2: Specialization – Energetic Use

A total of **four specializations** must be selected and at least **12 credits** must be acquired in each of these. A total of at least **48 credits** must be earned in this category 2.

CS0105	Modelling and Optimization of Energy Systems	6	WiSe
CS0132	Energy Process Engineering	6	WiSe
CS0260	Energy and Economics	5	WiSe
CS0026BOK	Energy Engineering	3	SuSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

**CS####  
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**CS####BOK  
Lectures in Vienna**

## Category 2: Specialization – Economy

A total of **four specializations** must be selected and at least **12 credits** must be acquired in each of these. A total of at least **48 credits** must be earned in this category 2.

CS0114	International Trade	6	WiSe
CS0116	Markets for Energy and Biobased Products	6	SuSe
CS0118	Environmental Accounting in Economics and Sustainability Sciences	6	WiSe
CS0202	Empirical Research Methods	6	SuSe
CS0027BOK	Resource Efficiency and Bioeconomy of Bio-based Materials	3	SuSe
CS0034BOK	Computer Simulation in Energy and Resource Economics	3	WiSe
CS0036BOK	Resource and Environmental Economics	3	SuSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

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Lectures in Vienna**



## Category 2: Specialization – Management

A total of **four specializations** must be selected and at least **12 credits** must be acquired in each of these. A total of at least **48 credits** must be earned in this category 2.

CS0121	<b>Sustainable Production</b>	6	WiSe
CS0125	<b>Plant and Technology Management</b>	6	SuSe
CS0128	<b>Corporate Sustainability Management</b>	6	WiSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

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## Category 2: Specialization – Life Cycle Assessment

A total of **four specializations** must be selected and at least **12 credits** must be acquired in each of these. A total of at least **48 credits** must be earned in this category 2.

CS0097	Advanced Environmental and Resource Economics	6	SuSe
CS0126	Advanced Seminar in Circular Economy and Sustainability Management	7	WiSe/ SuSe
CS0227	LCA Case Studies	5	WiSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

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## Category 2: Specialization – Materials

A total of **four specializations** must be selected and at least **12 credits** must be acquired in each of these. A total of at least **48 credits** must be earned in this category 2.

CS0267	Biological Materials in Nature and Technology	5	SuSe
CS0104	Biogenic Polymers	5	WiSe
CS0264	Polymer Processing	5	WiSe
CS0028BOK	Wood-Industrial Processes: Wood- and Fibre-based Materials	2	WiSe
CS0029BOK	Composite	2	WiSe
CS0030BOK	Wood and Fibre Quality	2	WiSe
CS0024BOK	Engineered wood products	2	WiSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

**CS####  
Module Number TUMCS  
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**CS####BOK  
Lectures in Vienna**

Category 3: subject-specific elective modules or lectures – part 1

In the category 3 subject-specific elective modules, at least 19 credits must be earned from the list

CS0012	<b>Artificial Intelligence for Biotechnology</b>	5	SuSe
CS0098	<b>Operations Research</b>	6	WiSe
CS0113	<b>Innovation in Bioeconomy</b>	6	WiSe
CS0180	<b>Concepts of Physics and Chemistry in Nature</b>	5	WiSe
CS0245	<b>Advanced Electronic Spectroscopy</b>	5	WiSe
CS0261	<b>Phytopharmaceuticals and natural products</b>	5	SuSe
CS0263	<b>Geothermal Energy Systems</b>	5	WiSe
CS0294	<b>Research Internship Biomass Technology</b>	5	WiSe/ SuSe
CS0019BOK	<b>Forest Soil Biology</b>	3	SuSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

**CS####**

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**CS####BOK**

**Lectures in Vienna**

Category 3: subject-specific elective modules or lectures – part 2

In the category 3 subject-specific elective modules, at least 19 credits must be earned from the list

CS0031BOK	<b>Mechanical and Thermal Process Technology II</b>	3	WiSe
CS0033BOK	<b>Applied Measurement and Control Systems</b>	3	WiSe
CS0037BOK	<b>Seminar in Global Change and Ecosystems</b>	2	WiSe
CS0038BOK	<b>Medicinal and aromatic plants</b>	3	WiSe
CS0039BOK	<b>Practical course in Energy Engineering</b>	3	WiSe
CS0047BOK	<b>Renewable Energy Resources</b>	3	WiSe

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

**CS####  
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**CS####BOK  
Lectures in Vienna**

## Category 3: general elective modules or lectures

In the category 3 subject-specific elective modules, at least **3 credits** must be earned from the list

The examination board continuously updates the catalog of subjects.

Changes will be announced in TUMonline at the beginning of the semester at the latest  
([look in TUMonline](#))

	Language courses e.g.		
	Look in TUMonline (list)		

**Summer Semester**

**SuSe**

**Winter Semester**

**WiSe**

**Numbers: CP  
Credit Points**

**CS####  
Module Number TUMCS  
(TUMonline)**

**CS####BOK  
Lectures in Vienna**