

[Unofficial, non-binding translation of the]

Curriculum

for the Master's Programme

Joint International Master's Programme in Sustainable Development

at the University Graz

[Important Disclaimer: This is no official document, but a translation of the legally binding curriculum, which is only available in German. This document is for information purposes only.]

The legal basis of the „Joint International Master's Programme in Sustainable Development“ is the University Act („Unternehmensgesetz, UG) and the statutes of the Karl-Franzens-University of Graz.

On (date), the Senate issued the following curriculum for the Joint International Master's Programme in Sustainable Development pursuant to § 25 (1) 10 UG.

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§ 1 Subject, qualification profile and relevance of the study programme

(1) Subject of the study programme

Since the World Environment Conferences in Rio de Janeiro in 1992, sustainable development - i.e. development that treats the environment with responsibility - has become an internationally recognised principle that many nations have committed themselves to implementing. There are many ways to achieve this, such as recycling materials, using natural resources responsibly, developing environmentally aware consumption patterns, encouraging social responsibility in companies and focusing on the quality of the environment they design. Sustainable development is an expression of the desire to reconcile economic and social development with the limits of our physical environment, both now and in the future.

Sustainable development is a high priority on the international, political and scientific agenda. It is also a cross-border issue, as no problem arising from the relationship between environment and development stops at a country's border. The concept of 'sustainable development' has far-reaching implications. There is an international obligation to carefully balance the benefits of economic and social development against possible environmental pressures. A good way to deal with this issue is to confront talented students with this problem in an international setting. The "Joint Master's Programme in Sustainable Development" offers an excellent framework for students to approach sustainability issues from an interdisciplinary perspective. The focus is on applying the competences to issues related to sustainable development and the needs and opportunities of social change. The programme combines the strengths and specialisations in teaching and cutting-edge research of eight universities and thus enables students to study in a way that is recognised in the countries of the consortium partners. While increasing the students' employability in the private, public and semi-public sectors, the programme also offers them the opportunity to pursue doctoral studies.

The "Joint International Master's Programme in Sustainable Development" is a joint study programme pursuant to §§ 51 (2) Z 26 in conjunction with 54d UG. It is offered in cooperation with the Università Ca' Foscari di Venezia (Italy), Universität Leipzig (Germany), Universiteit Utrecht (Netherlands), Universität Basel (Switzerland), Hiroshima University (Japan), Stellenbosch University (South Africa), and TERI School of Advanced Sciences (India). The Specialization Track (30 ECTS credits) must be completed at one of the partner universities.

(2) Qualification profile and competences

The objective of the "Joint International Master's Programme in Sustainable Development" is to offer an international and interdisciplinary Joint Master's programme of the highest quality, enabling participants to make a significant contribution to the transformation of society towards sustainability. The Joint Master's programme places great emphasis on both research and intervention strategies, it promotes the ability to work scientifically and especially the methodologically correct approach to problem solving, especially in an inter- and transdisciplinary framework.

The "Joint International Master's Programme in Sustainable Development" prepares students for doctoral studies and finally for careers in scientific research. The social orientation of the programme also ensures that graduates are well prepared for careers that are not directly related to scientific research. They can find employment in the private and public sectors (EU, national, regional and local government) as well as in consulting firms and NGOs. In the course of their professional career, graduates should be able to take up leading positions, especially with regard to the integration of knowledge and methodology and in the field of change management (especially in complex processes of social change).

The graduates of the "Joint International Master's Programme in Sustainable Development

- understand the dynamics, complexity and interaction between natural, social and economic processes and systems with regard to sustainable development
- have the ability to analyse sustainable development issues from a multidisciplinary perspective
- have broad scientific expertise
- are familiar with sufficient working methods and tools and are able to use them in scientific research and application
- are able to apply their knowledge and scientific skills in inter- and transdisciplinary teams to complex topics and have the necessary social skills (e.g. writing, discussion, conflict management, teamwork, project management) to make a significant contribution to the change towards a sustainable society
- are able to carry out independent scientific research and are able to put the results of a scientific study into the form of a scientific article or similar publication

(3) Demand and relevance of the study programme for science and the labour market

The partner universities offer various specialisations. Within each of these modules, the focus and thus the possible specialisation of the students depends on their individual Bachelor's programme (see module descriptions in Annex).

Occupational fields for which competences are developed depend very much on the specialisation ultimately chosen and include the academic, private, public and semi-public sectors. Typical occupational fields for graduates are

- Economic Management
- Environment, health and safety
- Environmental Management
- Innovation Management
- International organisations
- Management consultancy
- Quality Management
- Regional and urban planning
- Scientific research
- Sustainable corporate governance
- Teaching, training and further education

(The above-mentioned occupational fields were arranged alphabetically and not according to priorities).

Completion of the Master's programme entitles the holder to pursue further doctoral studies.

§ 2 General provisions

(1) Admission requirements

Sustainable development is an interdisciplinary field. Research in this field requires an interdisciplinary approach. For this reason, applicants for the "Joint International Master's Programme in Sustainable Development" will be accepted if they can demonstrate research skills, basic knowledge in the social and/or natural sciences and a general understanding of sustainable development and intervention strategies.

1. Admission to the course of study requires the successful completion of a selection procedure conducted by the respective home universities for their own applicants. Each home university makes a pre-selection for the most suitable candidates on the basis of a jointly defined system of criteria. The final selection decision is made by the selection committee of the consortium. The criteria system and the deadlines for the selection procedure are published each year on the following website: <http://www.jointdegree.eu/sd>.

The selection will be made on the basis of the following criteria, which the selection committee will use to assess the applicants:

- Previous experience in the field and academic achievements
- Quality and suitability of the completed preliminary studies
- Experience in sustainable development
- Quality of the letter of motivation
- Letter of recommendation

The decision on the selection will be sent to the applicant in writing. Selected students must subsequently go through the admission procedure at the respective home university in order to be admitted to the Master's programme.

2. The Bachelor's programmes in Environmental System Sciences at the University of Graz with the specialisation in Business Administration (USW/BW), Economics (USW/VWL), Geography (USW/Geography) and Natural Sciences-Technology (USW/NAWI-Tech) are in any case eligible subjects. Graduates of these Bachelor's programmes meet the admission requirements for the "Joint International Master's Programme in Sustainable Development" and do not need any further proof for admission.
3. Applicants who have completed at least three years of study (180 ECTS) at the above-mentioned partner universities or at another recognised post-secondary educational institution and who have sufficient previous knowledge from their previous studies in environmental sciences, systems science, social and economic sciences, natural sciences and engineering sciences, will be assessed by the selection committee with regard to 'subject suitability' according to the following criteria
 - Research skills & academic achievements
 - Basic knowledge in the social and/or natural sciences
 - General understanding of sustainable development and intervention strategies
 and may be admitted if the evaluation is successful.
4. Admission to the programme requires proof of the English language skills required for the successful continuation of studies.
 - a. Proof is deemed to have been furnished for persons with English as their mother tongue, as well as for persons who can prove that they have completed an English-language course of study at a recognised domestic or foreign university.
 - b. In any case, proof shall be deemed to have been furnished by 4 years of English language instruction at secondary level II and a school-leaving examination in English or by passing the school-leaving examination in English, as evidenced by an Austrian school-leaving certificate.
 - c. If a. and b. do not apply, proof of English language skills can be furnished as follows:
 - TOEFL: 580 paper based, 237 computer based, 93 internet based
 - IELTS (academic test): 6.5 (minimum 6.0 in the written module)
 - Cambridge EFL: minimum B (CAE), minimum C (CPE)
 - d. In exceptional cases, equivalent evidence may be submitted if the selection committee has assessed it as equivalent and justified this in writing.

(2) Duration and structure of the study programme

The Master's programme with a workload of 120 ECTS credits lasts four semesters and has a modular structure. 60 ECTS credits must be completed at the University of Graz, the Specialization Track or at least 30 ECTS credits must be completed at one of the partner universities. If a joint degree is sought with Hiroshima University, a total of 60 ECTS credits must be completed at Hiroshima University.

Module abbreviation and module	ECTS
Module A: Basics in Sustainable Development	30
Module B: Specialization Tracks <ul style="list-style-type: none"> ▪ B.1: Ca' Foscari University of Venice: Environmental Assessment ▪ B.2: University of Leipzig: Environmental and Resources Economics ▪ B.3: University of Leipzig: Environmental and Resources Management 	30

<ul style="list-style-type: none"> ▪ B.4: Utrecht University: Energy & Materials ▪ B.5: Utrecht University: Environmental Change and Ecosystems ▪ B.6: Utrecht University: Earth System Governance ▪ B.7: University of Basel: Sustainability: A Social Science Perspective ▪ B.8: Hiroshima University: Science and Technology for Sustainable Development ▪ B.9: Hiroshima University: Global Development Policy ▪ B.10: University of Graz: Corporate Sustainability Management ▪ B.11: University of Graz: Innovation and Transition Management ▪ B.12: University of Graz: Climate Change 	
Module C: Integration Module and Further Specialization	15
Free Electives	14
Master Thesis	30
Master Exam	1
Total	120

(3) Academic degree

1. Graduates of the "Joint International Master's Programme in Sustainable Development" are awarded the academic degree "Master of Science", abbreviated M.Sc.
2. Graduates of the "Joint International Master's Programme in Sustainable Development" who have completed the Specialization Track amounting to 30 ECTS credits (Specialization Track) at one of the partner universities awarding the title and who fulfil the legal requirements for the award of an academic degree from this university will receive a double degree awarded in cooperation with this university, provided that the relevant agreement has been signed. The notification of graduation from Graz University shall state that the degree is awarded jointly. The graduates thus acquire the exclusive right to hold *one* academic degree.

Of the partner universities mentioned above, the following are awarding titles:

- Universität Graz
 - Università Ca' Foscari Venezia
 - Universität Leipzig
3. Within the framework of a cooperation with Hiroshima University, which is regulated in a separate cooperation agreement, a joint final document (Joint Degree) is awarded, which is signed by both institutions and contains all the features of a graduation certificate from Graz University. A prerequisite for the issuing of the joint final document is the completion of a total of 60 ECTS credits at Hiroshima University, and 60 ECTS credits at Graz University.
 4. Graduates of the "Joint International Master's Programme in Sustainable Development" who have completed the Specialization Track of 30 ECTS credits at one of the non-title-awarding partner universities and who fulfil the legal requirements for the award of an academic degree from the University of Graz are awarded the academic degree of the University of Graz "Master of Science", abbreviated M.Sc. In the notification of graduation, which is issued exclusively by the University of Graz, it is stated that this is a joint study programme.

Of the partner universities mentioned above, the following are not awarding titles:

- Universiteit Utrecht
- Universität Basel

This also applies to graduates who have completed the Specialization Track amounting to 30 ECTS credits at Hiroshima University and who do not fulfil the requirements for a joint final document according to section 3.

5. Graduates of Università Ca' Foscari Venezia, Universität Leipzig, Universiteit Utrecht and Hiroshima University who complete their obligatory mobility stay within the framework of the joint study programme at the University of Graz, as stipulated in the cooperation agreement, shall be awarded the academic degree "Master of Science", abbreviated M.Sc., by the

University of Graz, provided that the corresponding agreement has been signed. In the notification of graduation from the University of Graz, it is stated that this is a jointly awarded academic degree and the graduates thus acquire the exclusive right to hold an academic degree.

(4) Number of possible participants in courses and ranking criteria

1. For pedagogical-didactic and spatial reasons, due to the number of devices/equipment or for safety reasons, the number of participants for the individual course types may be limited:

Course type	Number of participants
Lecture / Vorlesung (VO)	no limitation
Course / Kurs (KS)	25
Seminar / Seminar (SE)	15
Working Group / Arbeitsgemeinschaft (AG)	20
Internship / Praktikum (PR)	20
Excursion / Exkursion (EX)	20
Lecture with exercise / Vorlesung mit Übung (VU)	60

Notwithstanding or in addition to this, the restrictions on the number of participants contained in the above-mentioned curricula apply to the following modules/courses:

Module	Course(s)	Curriculum
A.6	Basics in Sustainable Development (Electives)	Master's Programme "Environmental Systems Sciences / Sustainability and Innovation Management"
B.10	Specialization Track University of Graz: Corporate Sustainability Management	Master's Programme "Environmental Systems Sciences / Sustainability and Innovation Management"
B.11	Specialization Track University of Graz: Innovation and Transition Management	Master's Programme "Environmental Systems Sciences / Sustainability and Innovation Management"
B.12.1	Climate Physics	Master's Programme "Environmental System Sciences / Climate Change and Environmental Technology"
B.12.2	Physical Geography	Master's Programme "Applied Physical Geography and Mountain Research"
B.12.3	Selected Topics in Climate and Environmental Change	Master's Programme "Applied Physical Geography and Mountain Research"

2. If the stipulated maximum number of participants is exceeded, students shall be admitted to the courses in accordance with the criteria of the URBI grading procedure laid down in the Senate Directive on the allocation of course places in courses with a limited number of participants, as amended.

§ 3 Structure and organisation of the study programme

(1) Modules

The modules and examinations are listed below with module title, course title, course type (LV type), ECTS credits (ECTS), contact hours (KStd.) and the recommended semester assignment (rec. sem.). The module descriptions can be found in Annex I.

		LV type	ECTS	KStd.	rec. sem.
Module A	Basics in Sustainable Development		30		
A.1	The Sustainability Challenge	SE	3	2	1
A.2	IP Sustainable Development, Integrating Perspectives	AG	10	6	1
A.3	Social Competences for Working in Inter- & Transdisciplinary Teams	SE	2	2	1
A.4	Methods for Inter- and Transdisciplinary Problem Solving	KS	2	2	1
A.5	Earth's Climate System and Climate Change	VO	3	2	1
A.6	Basics in Sustainable Development (Electives) <i>Courses amounting to 10 ECTS have to be completed.*</i>		10		1
A.6.1	Environmental and Technology Assessment	KS	4	2	1
A.6.2	Fundamentals of Circular Economy	KS	4	2	1
A.6.3	Waste and Recycling	KS	4	2	1
A.6.4	Environmental Decision Making	KS	4	2	1
A.6.5	Human Factors in Transitions	KS	4	2	1
A.6.6	Sustainable Business Models	KS	4	2	1
A.6.7	Data in Systems Sciences	VO	3	2	1
A.6.8	Seminar for Data in Systems Sciences	SE	4	2	1
A.6.9	Globalization and Development	KS	6	2	1
A.6.10	Climate Justice	SE	6	2	1
A.6.11	Seminar in Research Methodology	SE	3	2	1
A.6.12	Renewable Resources - Chemistry and Technology I	VO	2	1.33	1
A.6.13	Renewable Resources - Chemistry and Technology II	VO	2	1.33	1
A.6.14	Further Selected Topics I		2		1
A.6.15	Further Selected Topics II		3		1
A.6.16	Further Selected Topics III		4		1
A.6.17	Further Selected Topics IV		6		1

Module B	Specialization Tracks (Electives)		30		2
One of the modules B.1 to B.9 must be completed. Modules B.10 to B.12 are only available to students from partner universities who are completing the compulsory mobility semester at Graz University. However, the courses assigned to these specialisations can be taken within the framework of the "Free Electives".					
B.1	Specialization Track Ca' Foscari University of Venice: Environmental Assessment		30		2
B.2	Specialization Track University of Leipzig: Environmental and Resources Economics		30		2
B.3	Specialization Track University of Leipzig: Environmental and Resources Management		30		2
B.4	Specialization Track Utrecht University: Energy & Materials		30		2
B.5	Specialization Track Utrecht University: Environmental Change and Ecosystems		30		2
B.6	Specialization Track Utrecht University: Earth System Governance		30		2
B.7	Specialization Track Basel University: Sustainability: A Social Science Perspective		30		2
B.8	Specialization Track Hiroshima University: Science and Technology for Sustainable Development		30		2
B.9	Specialization Track Hiroshima University: Global Development Policy		30		2
B.10	Specialization Track University of Graz: Corporate Sustainability Management		30	16	2
B.10.1	Strategic Sustainability Management	KS	4	2	2
B.10.2	Sustainability Controlling and Management	KS	4	2	2
B.10.3	Quantitative Methods of Social Research	KS	4	2	2
B.10.4	Research Project Sustainability and Innovation Management	AG	6	4	2
B.10.5	Selected Topics of Sustainability Management <i>Courses amounting to 12 ECTS credits must be completed.*</i>		12	6	2
	Value Chain Management	KS	4	2	2
	Change Management and Learning for Sustainability	KS	4	2	2
	Waste and Recycling	KS	4	2	2
	Sustainable Business Models	KS	4	2	2
	Sustainable Product Management	KS	4	2	2
	Selected Topics of Sustainability Management	KS	4	2	2
B.11	Specialization Track University of Graz: Innovation and Transition Management		30	16	2
B.11.1	Transition Management	KS	4	2	2
B.11.2	Sustainable Innovation	KS	4	2	2
B.11.3	Quantitative Methods of Social Research	KS	4	2	2
B.11.4	Research Project Sustainability and Innovation Management	AG	6	4	2

B.11.5	Selected Topics of Innovation and Transition Management <i>Courses amounting to 12 ECTS credits must be completed.*</i>		12	6	2
	Environmental and Technology Assessment	KS	4	2	2
	Environmental Decision Making	KS	4	2	2
	Product and Service Development	KS	4	2	2
	Human Factors in Transitions	KS	4	2	2
	Systems Sciences in Innovation and Transition Research	KS	4	2	2
	Selected Topics of Innovation Management	KS	4	2	2
B.12	Specialization Track University of Graz: Climate Change		30		2
B.12.1	Climate Physics <i>Courses amounting to 12 ECTS credits must be completed.*</i>		12	8	2
	Climate and Environmental Change	SE	3	2	2
	Atmospheric Dynamics	VO	3	2	2
	Climate Dynamics	VO	3	2	2
	Atmospheric Measurement Methods	VO	3	2	2
	Selected Topics in Atmospheric and Climate Physics	SE	3	2	2
	Physical Oceanography, Hydrology and Climate	VO	3	2	2
	Climate Modelling	VO	3	2	2
B.12.2	Physical Geography <i>Courses amounting to 12 ECTS credits must be completed.*</i>		12	6	2
	Mountain Meteorology and Climatology	VO	4	2	2
	Mountain Hydrology	VO	4	2	2
	Climate Change and Natural Hazards	VO	4	2	2
	Climatology and Hydrology	VO	4	2	2
	Seminar in Physical Geography	SE	4	2	2
	Geomorphology and Earth System Sciences	PR	4	2	2
B.12.3	Selected Topics in Climate and Environmental Change <i>Courses amounting to 6 ECTS credits must be completed.*</i>		6		2
	Climatological/Hydrological data processing and modelling	VU	4	2	2
	Monitoring of geomorphological processes	VU	4	2	2
	Practical Course in Hydrology	PR	4	2	2
	Further selected topics I		2		2
	Further selected topics II		3		2
	Further selected topics III		4		2
Module C	Integration Module and Further Specialization		15	10	3
C.1	Inter- and Transdisciplinary Case Study	AG	10	6	3
C.2	Social Competences for Managing Sustainable Development	SE	3	2	3
C.3	Master Seminar	SE	2	2	4
	Free Electives		14		

	Master Thesis		30		3-4
	Master Exam		1		4

*A list of the courses offered in the respective semester will be published in due time on the website www.jointdegree.eu/sd/.

(2) Master thesis

1. The Master's thesis serves as proof of the ability to study and research independently and must be written in English. The thesis must include a short summary.
2. The Master's thesis plays a central role in the "Joint International Master's Programme in Sustainable Development". It is regarded as proof of the ability to work on a scientific topic independently and in a way that is justifiable in terms of content and methodology. The Master's thesis certifies the graduate's qualification and also guarantees that the final performance requirements of the Master's programme have been met.
3. Students are recommended to determine the topic of the Master's thesis in the course of the third semester after consultation with a supervisor. They submit a written exposé (including a description of the problem, research objectives and questions, research methods, theoretical perspective, expected results, timetable, bibliography), which must be accepted by the supervisor and a second reader from a partner university.
4. The Master's thesis is assessed by the supervisor at the University of Graz and a second reader who is a member of the teaching staff at one of the partner universities (this partner university does not necessarily have to be the one where the mobility semester was completed). The second reader provides a short assessment including a grade proposal. The grade of the Master's thesis is determined from the assessments of the supervisor and the second reader; in case of different assessments, the arithmetic mean of the two grades is calculated. If decimal places occur in the averaging process, these must be deleted for the purpose of determining the grade.

(3) Free Electives

1. It is recommended to use the "Free Electives" for further specialisations and meaningful in-depth studies and to choose from the following areas Courses on special research methods and on the theory of science, advanced courses in the field of sustainable development, or courses from the field of women's and gender studies, the fields of foreign languages, from the "Timegate" programme, as well as courses from the Centre for Social Competence and the Inter-University Research Centre for Technology, Work and Culture (IFZ).
2. Students are recommended to complete a career-oriented practice within the framework of the "Free Electives" to the extent of a maximum of 12 ECTS credits, whereby one week in the sense of full employment corresponds to 1.5 ECTS credits.

(4) Student mobility

Students must complete the Specialization Track at a partner university (compulsory semester abroad). When organising the obligatory mobility stay and planning the study project (ECTS credits to be acquired), the partner universities' respective legal regulations for the award of the academic degree must also be observed.

In addition to the obligatory stay abroad, further stays abroad can also be undertaken.

Furthermore, upon application to the governing body responsible for study law, the achievements of shorter study stays abroad, such as active participation in international summer or winter schools, can also be recognised within the framework of "Free Electives".

§ 4 Examination regulations

The Master's examination is an oral, commission-based subject examination worth 1 ECTS credit point. It can only be taken if all the other academic achievements listed in § 3, section 1 have been successfully completed.

The subject of the Master's examination is the public defence of the Master's thesis and topics from the module to which the Master's thesis is assigned. A uniform grade is to be awarded for the Master's examination, which also takes into account the overall impression of the examination.

§ 5 Forms of teaching and learning

(1) Language of instruction

All modules, examinations and papers are held, completed and written in English and the programme can be completed in any case using this language exclusively.

§ 6 Entry into force of the curriculum

This 2020 curriculum will come into force on 1 October 2020.

§ 7 Transitional provisions

Students of the Joint International Master's Programme in Sustainable Development, who are subject to the 13W version of the curriculum when it enters into force on 1 October 2020, are entitled to complete their studies within six semesters according to the 13W version of the curriculum. If the programme is not completed by 30.09.2023, the students are to be subject to the curriculum for the Master's programme Joint International Master's Programme in Sustainable Development in its currently valid version. Students according to the previous valid curriculum are entitled to be subject to the currently valid curriculum at any time during the admission periods.