

module code /
module title

Ecotox / Environmental Risks and Ecotoxicology

 date / version of the module
description

25.05.2022

1 INFORMATION ON THE MODULE		
1a	module code	Ecotox
1b	module title (German title)	Umweltrisiken und Ökotoxikologie
1c	module title (English title)	Environmental Risks and Ecotoxicology
1d	credit points	6
1e	responsible for the module	Prof. Dr. Juliane Filser
1f	type of module	elective module
1g	programs using the module	M.Sc. Ecology
1h	organizational unit offering the module	Klicken Sie hier, um Text einzugeben.
1i	content-related prior knowledge or skills	Fundamental knowledge on concepts of ecology and chemistry is recommended
1j	learning contents	<ul style="list-style-type: none"> Lecture & seminar: Hazardous substances, emission, environmental behaviour, bioavailability, acute and chronic exposition, biomagnification, principles of ecotoxicological test systems (from molecules to model ecosystems), modes of action and test endpoints, toxicodynamics, biomarkers, thinking in terms of structure-activity relations (T-SAR), persistency, bioaccumulation, biodegradation, data availability and uncertainty, environmental monitoring, chemicals regulation, legal aspects. Laboratories with two toxic model substances: literature study, occupational safety, analytics, aquatic and terrestrial tests with different organism groups; data evaluation and presentation

1k

learning outcomes/
competencies/
targeted competencies

The students

- have an overview about the most relevant environmental hazards
- are able to assess modes of action and potential risks (a priori) under varying environmental conditions
- know selected analytical methods in chemistry and are aware of their importance in risk assessment
- have a basic understanding of risk assessment and regulation and can critically evaluate the associated potentials and limitations
- know the key aspects of occupational safety
- are familiar with a selection of standardised test methods, dose response curves and threshold values in environmental hazard assessment and can interpret examples of these
- are aware of data variability, accuracy and reproducibility and the resulting need for independent test runs

1l

calculation
of student workload
*(part a: calculation of
presence time and working
hours)*

The total amount of the presence time and working hours of the module has to be calculated additionally in the detailed calculation a) to c).

a) detailed calculation:

SWS / presence time/working hours in each course of the module

<input checked="" type="checkbox"/>	1	lecture(s) with	1	SWS/ contact hours	14	hours of presence time
-------------------------------------	---	-----------------	---	-----------------------	----	---------------------------

<input checked="" type="checkbox"/>	1	seminar(s) with	1	SWS/ contact hours	14	hours of presence time
-------------------------------------	---	-----------------	---	-----------------------	----	---------------------------

<input checked="" type="checkbox"/>	1	exercise(s) with	3.5	SWS/ contact hours	49	hours of presence time
-------------------------------------	---	------------------	-----	-----------------------	----	---------------------------

<input type="checkbox"/>		internship(s) with		sum of working hours		
--------------------------	--	--------------------	--	-------------------------	--	--

<input type="checkbox"/>		seminar(s) with		SWS/ contact hours		total hours of presence time
--------------------------	--	-----------------	--	-----------------------	--	---------------------------------

<input type="checkbox"/>		laboratory/laboratories with		SWS/ contact hours		total hours of presence time
--------------------------	--	------------------------------	--	-----------------------	--	---------------------------------

<input type="checkbox"/>		tutorial(s) with		SWS/ contact hours		
--------------------------	--	------------------	--	-----------------------	--	--

<input type="checkbox"/>		excursion(s) with		SWS contact hours in total		working hours
--------------------------	--	-------------------	--	----------------------------------	--	---------------

other form of course (e.g. block seminar), namely this:

Klicken Sie hier, um Text einzugeben.

with SWS / with total contact hours presence time working hours

		<p>= sum of presence time and working hours:</p> <p>77</p>
	<p>calculation of student workload</p> <p><i>(part b: preparation time and follow-up work/self-study)</i></p>	<p>b) working hours for preparation/follow-up work of the course(s) and/or self-study</p> <p>= sum of working hours:</p> <p>78 hours</p>
	<p>calculation of student workload</p> <p><i>(part c: exam preparation etc.)</i></p>	<p>c) exam preparation (incl. examination)</p> <p>= sum of working hours:</p> <p>25 hours</p>
	<p>calculation of student workload</p> <p><i>(total amount of hours including a) - c))</i></p>	<p>Total amount of the presence time and working hours a) to c):</p> <p>180 hours</p>
1m	<p>description of possible optional courses in the module</p>	<p><u>Can a student choose between different courses within the module?</u></p> <p>NO</p> <p><u>Short description of selection option</u></p> <p>Klicken Sie hier, um Text einzugeben.</p>
1n	<p>language(s) of instruction</p>	<p><input type="checkbox"/> German <input checked="" type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> French</p> <p><input type="checkbox"/> Other, namely this:</p> <p>Klicken Sie hier, um Text einzugeben.</p>
1o	<p>frequency</p>	<p><i>(regular cycle module is offered) e.g.: winter semester, yearly or summer semester, yearly or each semester</i></p> <p>winter semester yearly</p> <p>Klicken Sie hier, um Text einzugeben.</p>
1p	<p>duration</p>	<p>choose an option</p> <p>three weeks (including the examination)</p>
1q	<p>Literature <i>(optional)</i></p>	<p>Klicken Sie hier, um Text einzugeben.</p>

1r	more information on the module (<i>optional</i>)	Instructors: Juliane Filser
2 INFORMATION ON THE MODULE EXAMINATION (see also AT Art. 5 section 8)		
2a	type of examination	<input type="checkbox"/> module exam; i.e. exam with only one component (MP) <input checked="" type="checkbox"/> combination exam, i.e. exam with several components (administered by instructors) (KP) <input type="checkbox"/> partial exam; i.e. exam with several components (administered by registrar) (TP)
2b	exam components or prerequisites (<i>type, number</i>)	<p><i>PL</i> = graded component of the examination <i>SL</i> = ungraded component of the examination, coursework <i>PVL</i> = prerequisite of the examination (see AT Art. 5 Section 10)</p> <p><input checked="" type="checkbox"/> PL 3 <input type="checkbox"/> SL <input type="checkbox"/> PVL justification</p> <p>If necessary, further explanations:</p> <p>The compensatory principle applies, so that failure in a minor graded component can be compensated by other graded components if the overall performance is sufficient.</p> <p>The portfolio forms a unit and is graded as such.</p>
2c	Give this information for combination examinations only: Weights (in percentage) of component grades	<p>PL 1: (25%) Presentation, oral (as individual seminar presentation)</p> <p>PL 2: (50%) Presentation, oral (as seminar group presentation on the practical)</p> <p>PL 3: (25%) Portfolio, consisting of short tests on the lecture</p> <p>PL 4: Klicken Sie hier, um Text einzugeben.</p> <p>If necessary, further comments:</p> <p>Klicken Sie hier, um Text einzugeben.</p>
2d	form of examination (see AT BPO/AT MPO Art. 8, 9 and 10)	<input type="checkbox"/> Assignment <input type="checkbox"/> Oral examination (single) <input checked="" type="checkbox"/> Presentation, oral <input type="checkbox"/> Written examination <input type="checkbox"/> Group examination, oral <input type="checkbox"/> Presentation and written assignment <input checked="" type="checkbox"/> Portfolio <input type="checkbox"/> Project report <input type="checkbox"/> Bachelor Thesis <input type="checkbox"/> Internship report <input type="checkbox"/> Colloquium <input type="checkbox"/> Master Thesis <input type="checkbox"/> Other (concrete definition is given in the examination regulations):
2e	language(s) of instruction	<input type="checkbox"/> German <input checked="" type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> French <input type="checkbox"/> Other, namely this: Klicken Sie hier, um Text einzugeben.