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# Verkündungsblatt

der Universität Duisburg-Essen - Amtliche Mitteilungen

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Jahrgang 7

Duisburg/Essen, den 1. Juli 2009

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**Erste Ordnung zur Änderung der Prüfungsordnung  
für den Master-Studiengang  
Water Science  
an der Universität Duisburg-Essen  
Vom 25. Juni 2009**

Aufgrund des § 2 Abs. 4 und des § 64 Abs. 1 des Gesetzes über die Hochschulen des Landes Nordrhein-Westfalen (Hochschulgesetz - HG) vom 31.10.2006 (GV. NRW. S. 474), zuletzt geändert durch Gesetz vom 18.11.2008 (GV. NRW. S. 710), hat die Universität Duisburg-Essen folgende Ordnung erlassen:

**Artikel I**

Die Prüfungsordnung für den Master-Studiengang Water Science an der Universität Duisburg-Essen vom 30.07.2007 (Verkündungsblatt Jg. 5, 2007 S. 411) wird wie folgt geändert:

Die Anlage 4 erhält die beiliegende Fassung.

**Artikel II**

Diese Ordnung tritt am Tage nach ihrer Veröffentlichung im Verkündungsblatt der Universität Duisburg-Essen - Amtliche Mitteilungen in Kraft.

Ausgefertigt aufgrund des Beschlusses des Fachbereichsrates des Fachbereichs Chemie vom 12.05.2009.

Duisburg und Essen, den 25. Juni 2009

Für den Rektor  
der Universität Duisburg-Essen  
Der Kanzler  
In Vertretung  
Eva Lindenberg-Wendler

#### **Anlage 4**

#### **Regelstudienplan**

Das Lehrangebot im Master-Programm Chemie erstreckt sich über zwei Jahre. Das Studium umfasst Lehrveranstaltungen im Pflicht- und Wahlpflichtbereich, wie im nachfolgenden Regelstudienplan erklärt:

**Master's Programme: Water Science**

Module	Sem.	Total Number of Credits for Modules	Course	HPW				Credits	Category	Requirements	Exam
				L	S	P	Total				
Required Modules											
Applied Analytical Chemistry	2	5	Applied Analytical Chemistry	2	1		3	5	Advanced	none	Written exam
Applied Microbiology	2	6	Geomicrobiology	2			2	3	Advanced	none	Written exam for module
			Hygiene	2			2	3			
Biofouling, Biocorrosion	3	5	Biofouling, Biocorrosion	2	1		3	5	Advanced	none	Written exam
Chemometrics and Statistics	1	5	Chemometrics and Statistics	2	1		3	5	Advanced	none	Written exam
Environmental Microbiology	1	12	Environmental Microbiology	2	1		3	5	Advanced	none	Written exam for module
	2		Practical Course Environmental Microbiology		1	8	9	7			
Practical Analytical Chemistry	3	10	Practical Course Analytical Chemistry		1	14	15	10	Advanced	Module: Applied Analytical Chemistry	
Research Practical	3	10	Research Practical Course		1	14	15	10	Advanced	Practical Courses in Anal. Chemistry + Environmental Microbiology	
Water Chemistry	1	5	Water Chemistry	2	1		3	5	Advanced	none	Written exam and presentation

**Master's Programme: Water Science**

Module	Sem.	Total Number of Credits for Modules	Course	HPW				Credits	Category	Requirements	Exam
				L	S	P	Total				
<b>Optional Modules</b>											
Additional teaching classes can be taken following application to the examination board.											
Advanced Mass Spectrometry	2	3	Advanced Mass Spectrometry	1	1		2	3	Advanced	None	Written or oral exam
Ecology	2 2	4	Aquatic Organisms	2			2	2	Interdisciplinary	None	Written exam for module
			Freshwater Ecosystems	2			2	2			
Electrochemistry and Electrochemical Analysis	1 or 3	5	Electrochemistry and Electrochemical Analysis	2	1		3	5	Advanced	None	Written exam
Environmental Chemistry: Air	2	5	Environmental Chemistry: Air	2	1		3	5	Advanced	None	Written exam
Environmental Chemistry: Pollutants	1 or 3	5	Environmental Chemistry: Pollutants	2	1		3	5	Advanced	None	Written exam
Environmental Chemistry: Soil / Waste	1 or 3	5	Environmental Chemistry: Soil / Waste	2	1		3	5	Advanced	None	Written exam
Excursions	1,2 or 3	2	Excursions		2		2	2	Interdisciplinary	None	
Hydrochemical System Modelling	2	5	Hydrochemical System Modelling	2	1		3	5	Interdisciplinary	None	Oral exam
Management	2 3	6	Quality Management	1	1		2	3	Interdisciplinary	None	Written exam for module
			Project Management	2			2	3			
Membrane Technologies	1 or 3	3	Membrane Technologies	1	1		2	3	Interdisciplinary	None	Written exam
Microbial Physiology	2	3	Microbial Physiology	2				3	Advanced	None	Written Exam

**Master's Programme: Water Science**

Module	Sem.	Total Number of Credits for Modules	Course	HPW HPW				Credits	Category	Requirements	Exam
				L	S	P	Total				
(Optional Modules continued)											
Stable Isotope Analysis	1 or 3	5	Stable Isotope Analysis	2	1		3	5	Advanced	None	Written exam and presentation
Technical Engineering Water	2 3	9	Technical Engineering Water	2	1		3	5	Interdisciplinary	None	Written or oral exam for Module
			Practical Course Technical Engineering Water			3	3	4		Lecture: Technical Engineering Water	
Wastewater Treatment	1 or 3	5	Wastewater Treatment	2	1		3	5	Advanced	None	Written exam
Water Pollution / Water Pollution Monitoring	1,2 or 3	5	Water Pollution / Water Pollution Monitoring	2		1	3	5	Advanced	None	Written or oral exam
Water – The Lecture*	2 or 4	3	Water – The Lecture	2			2	3	Interdisciplinary	None	Written exam
Water: Rules, Norms, Laws	1 or 3	3	Water: Rules, Norms, Laws	2			2	3	Interdisciplinary	None	Written exam
Master Thesis											
Master Thesis	4	30	Master Thesis					30	Advanced	80 Credits	Thesis

**Master's Programme: Water Science  
Summary**

Compulsory Courses				Analytical Chemistry Biosciences Research Practical					<b>25 23 10</b>			
Optional Courses									<b>32</b>			
Master Thesis									<b>30</b>			
Total									<b>120</b>			

**\* This course can only be chosen as an optional module in the Master's Programme if the student has not already taken the subject in the Bachelor Curriculum Water Science – Wasser: Chemie, Analytik, Mikrobiologie. In unclear cases the examination board decides on approval.**

## Study Plan Master of Science Water Science

Module	Course	HPW	Cr.	Exam
<b>1st Semester</b>				
Chemometrics and Statistics	Chemometrics and Statistics	3	5	Written exam
Environmental Microbiology	Environmental Microbiology	3	5	Written exam
Water Chemistry	Water Chemistry	3	5	Written exam
	Optional Courses		15	2 exams or colloq.
	<b>Total</b>		<b>30</b>	<b>5 Exams</b>
<b>2nd Semester</b>				
Applied Analytical Chemistry	Applied Analytical Chemistry	3	5	Written exam
Applied Microbiology	Hygiene	2	3	Written exam for the module
Applied Microbiology	Geomicrobiology	2	3	
Environmental Microbiology	Practical Course Environmental Microbiology	9	7	
	Optional Courses		12	2 exams or colloq.
	<b>Total</b>		<b>30</b>	<b>4 Exams</b>
<b>3rd Semester</b>				
Biofouling, Biocorrosion	Biofouling, Biocorrosion	3	5	Written exam
Practical Analytical Chemistry	Practical Course Analytical Chemistry	15	10	
Research Practical	Research Practical Course	15	10	
	Optional Courses		5	1 exam or colloq.
	<b>Total</b>		<b>30</b>	<b>2 Exams</b>
<b>4th Semester</b>				
Master Thesis	Master Thesis		30	Written thesis
	<b>Total</b>		<b>30</b>	<b>1 Exam</b>
	<b>Overall Total</b>		<b>120</b>	<b>12 Exams</b>

