

## Hydrobiology – Water Quality Management, MSc – University of Debrecen, Hungary

	semester				credit	exam/pract
	1.	2.	3.	4.		
	courses week/semester type <sup>1</sup> (lecture/ seminar/ practice)					
<b>Basic knowledge</b>						
1. General Hydrobiology <i>Grigorszky István and Nagy Sándor Alex.</i>	<i>2/30 lec. 1/15 semi.</i>				5	<i>exam</i>
2. Mathematical methods in Hydrobiology <i>Tóthmérész Béla .</i>	<i>2/30 lec. 1/15 prac..</i>				5	<i>exam/prac.</i>
3. Hydrology and Geography <i>Szabó Szilárd</i>	<i>2/30 lec. 1/15 prac..</i>				5	<i>exam/prac.</i>
4. Applied Hydrobiology <i>Kaszáné Kiss Magdolna and Nagy Sándor Alex</i>		<i>30 lec.. 1/15 semi.</i>			5	<i>exam</i>
<b>sum:</b>	<b>6/90 lec. 1/15 sem. 2/30 prac.</b>	<b>2/30 lec. 1/15 sem.</b>			<b>20</b>	<b>4 exam., 2 prac.</b>
<b>Core subjects</b>						
1. Water Chemistry <i>Bácsi István</i>	<i>2/30 lec. 1/15 prac.</i>				5	<i>exam/prac.</i>
2. Running Water Ecology <i>Grigorszky István and Antal László</i>	<i>2/30 lec. 1/15 prac..</i>				5	<i>exam/prac.</i>
3. Standing Water Ecology <i>Grigorszky István and Nagy Sándor Alex</i>	<i>2/30 lec. 1/15 prac.</i>				5	<i>exam/prac.</i>
4. Wetland Ecology <i>Grigorszky István and Szabó László József</i>	<i>2/30 lec. 1/15 prac.</i>				5	<i>exam/prac.</i>
5. Water Management <i>Grigorszky István</i>		<i>2/30 lec.. 1/15 semi.</i>			5	<i>exam</i>
<b>sum:</b>	<b>8/120 lec.. 4/60 prac.</b>	<b>2/30 lec. 1/15 sem.</b>			<b>25</b>	<b>5 exam., 4 prac.</b>
<b>specific scientific knowledge</b>						
1. Aquatic Toxicology <i>Vasas Gábor</i>		<i>2/30 lec. 1/15 prac.</i>			5	<i>exam/prac.</i>
2. Paleohydrobiology <i>Kaszáné Kiss Magdolna and Gyulai István</i>		<i>2/30 lec. 1/15 prac.</i>			5	<i>exam/prac.</i>
3. Water Quality Monitoring. <i>Bácsi István and Gyulai István</i>			<i>2/30 lec.. 1/15 semi</i>		5	<i>exam</i>
4. European Water Framework Directive <i>Grigorszky István and Antal László</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam/prac.</i>
5. Nature Conservation <i>Gőri Szilva</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam/prac.</i>
<b>sum:</b>		<b>4/60 lec. 2/30 prac.</b>	<b>2/30 lec. 1/15 sem.</b>	<b>4/60 lec. 2/30 prac.</b>	<b>25</b>	<b>5 exam., 4 prac.</b>

<b>Optional courses</b>						
1. Water Microbiology, <i>Bácsi István</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
2. Algology <i>Grigorszky István and Bácsi István</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
3. Macrophytes <i>Grigorszky István and Gyulai István</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
4. Zooplankton <i>Kaszáné Kiss Magdolna and Gyulai István</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
5. Macroinvertebrates, <i>Szabó László József</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
6. Fishes <i>Antal László</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
7. Research Project Management <i>Grigorszky István</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
8. Tropical ecology <i>Nagy Sándor Alex</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
9. Fundamentals of Geoinformation Systems for Water Management <i>Szabó Szilárd</i>				<i>2/30 lec. 1/15 prac.</i>	5	<i>exam, prac.</i>
<b>sum:</b>		<b>4/60 lec. 2/30 prac.</b>	<b>4/60 lec. 2/30 prac.</b>	<b>2/30 lec. 1/15 prac.</b>	<b>25 (choose 5 courses)</b>	

<b>Thesis work and consultation</b>						
Thesis writing I.				<i>4/60 sem.</i>	5	
Thesis writing II.					<i>4/60 sem.</i>	10
<b>sum:</b>				<b>4/60 sem.</b>	<b>4/60 sem.</b>	<b>15</b>

<b>Field Practice</b>						
Field Practice I.		<i>2/30 sem.</i>			5	
Field Practice II.			<i>2/30 sem.</i>		5	
<b>sum:</b>		<b>2/30 sem.</b>	<b>2/30 sem.</b>		<b>10</b>	

<b>Summary</b>						
<b>Total hours</b>	<b>315</b>	<b>300</b>	<b>225</b>	<b>195</b>	<i>1035</i>	
<b>courses type/semester</b>	<b>14 lecture 1 semester 6 practice</b>	<b>12 lecture 4 semester 4 practice</b>	<b>6 lecture 7.semester 2. practice</b>	<b>6 lecture 4 semester 3. practice</b>	<i>38 lecture 16 semester 15 practice</i>	
<b>credit/semester</b>	<b>35</b>	<b>35</b>	<b>25</b>	<b>25</b>	<i>120 credit</i>	
<b>exam/semester</b>	<b>7</b>	<b>6</b>	<b>3</b>	<b>3</b>	<i>19 exam</i>	