

Schedule of the Summer Course  
**„Hydrobiology and inland environmental science in Poland”**

by the Faculty of Fisheries Sciences, Hokkaido University (HU), Japan  
and the Department of Zoology, Faculty of Biology and Biotechnology,  
the University of Warmia and Mazury in Olsztyn (UWM), Poland

**12-24 September 2016**

Lectures (each 45') for all Students/Participants  
given by Professors: 3 from HU, 1 from PAN in Olsztyn, 4 from UWM in Olsztyn

Prof. **Yasuaki TAKAGI**, Prof. **Takafumi FUJIMOTO** - Coordinators from HU;  
Prof. **Alicja BORON** - Coordinator from UWM

**Lectures and practical training for all Students/Participants**

Who	From	When	Title/activities
Yasuaki Takagi	HU	<b>15.09.2016</b> 9:30-11:00	Lecture (2 hours): <b>"Bridging the gap between basic research and industry - Studies on efficient use of aquaculture wastes"</b>
Takafumi Fujimoto	HU	<b>19.09.2016</b> 9:30-11:00	Lecture (2 hours): <b>"Chromosome set manipulation and embryo manipulation..."</b>
Hisae Kasai	HU	<b>16.09.2016</b> 9:30-11:00	Lecture (2 hours): <b>"Salmonid viral diseases and disease control strategies in Japan"</b>
Andrzej Ciereszko	PAN	<b>20.09.2016</b> 9:30-11:00 11:00-13:15	Lecture (2 hours): <b>"Cryopreservation of the fish sperm"</b> Practical training (3 hours): <b>"Cryopreservation of the fish sperm"</b>
Alicja Boron	UWM	<b>12.09.2016</b> 10:30-12:00	Lecture (2 hours): <b>"Hydrobiology as the science of life processes in water - field of research interests and inland water bodies in Poland"</b>
Dorota Fopp-Bayat	UWM	<b>16.09.2016</b> 11:00-12:30 13:30-16:30	Lecture (2 hours): <b>"Application of genetic analysis in aquaculture and conservation of sturgeons"</b> - Practical training (4 hours) by prof. Dorota Fopp-Bayat and Marcin Kuciński, PhD student <b>"Analysis of the basic parameters of water quality"</b>
Stanisław Czachorowski	UWM	<b>13.09.2016</b> 9:30-11:00 11:00-13:15	Lecture (2 hours): <b>"Animals living in Polish inland water bodies; characteristic of the most typical taxa, their adaptations and limitations"</b> Practical training (3 hours): <b>"Identification of main typical invertebrates taxa inhabiting Polish lakes and rivers"</b>
Lech Kirtiklis, Olga Jablonska	UWM	<b>14.09.2016</b> 9:30-11:00 11:00-12:30 13:30-15:00	Lecture (2 hours): <b>"Taxonomical identification – a review of the genetic methods"</b> Practical training (4 hours): <b>"Molecular techniques in freshwater animals' taxonomy"</b>
<b>total: 30 hours</b>			<b>16 hours of lectures</b> <b>14 hours of practical training</b>

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 Prof. **Alicja BORON** - Coordinator from UWM

Each Group (#1 and #2) contains: 4 students (two from HU and two from UWM), assistant professor or PhD student (UWM) - supervisors of Participants and professor (UWM or HU).  
 Most of activities will be held in The Molecular Diagnostics Laboratory

Day	Activities	
	Group #1	Group #2
<b>10.09 Saturday</b>	<b>Arrive at Poland</b> (stay one night at Warszawa, because of arrival at night (20:45))	
<b>11.09 Sunday</b>	<b>Move to Olsztyn</b> (Yasuaki TAKAGI, Hisae KASAI, HU students) <b>Alicja BORON, Yasuaki TAKAGI</b> Orientation; 15:15-17:00 Welcome party/Ice breaking (coffee/tea with sweets)	
<b>12. 09. (Monday)</b> 10:00-10:20	<b>Prof. Tadeusz Kaminski</b> , Dean of the Faculty of Biology and Biotechnology Welcome address Start of the summer course – <b>Yasuaki TAKAGI, Alicja BORON</b>	
10:30-12:00 (2hrs)	Lecture by Alicja Boron " <b>Hydrobiology as the science of life processes in water - field of research interests and inland water bodies in Poland</b> "	
12:15-13:00 (1hrs)	<b>Four Mini-projects (MP) - 2 for each Group - short seminar - introduction into the topics by Yasuaki TAKAGI, Alicja BORON;</b>	
	<b>1. MP (14hrs) by Dorota Juchno, PhD</b> "Gonad histology of the Prussian carp <i>Carassius gibelio</i> (Teleostei, Cyprinidae) males from bisexual population in Poland"	<b>3. MP (14hrs) by PhD student - Aleksandra Szabelska, Lech Kitiklis, PhD</b> "The length and chromosomal mapping of 5S rDNA sequence of <i>Carassius gibelio</i> of different ploidy level"
	<b>2. MP (20hrs) by PhD student - Anna Przybyl and Anna Leska, PhD</b> "Testosterone concentration in males and females of the Prussian carp <i>Carassius gibelio</i> (Bloch, 1782) from bisexual population in Poland"	<b>4. MP (20hrs) by PhD student - Karolina Kowalewska, dr Olga Jabłońska, PhD</b> "Analysis of DNMT1, DNMT3a, DNMT3b gene expression during embryonic development of the spined loach <i>Cobitis taenia</i> "
13:00-14:00	Lunch	
14:15-17:15 (4hrs)	<b>1. MP (14hrs) by Dorota Juchno, PhD</b> "Gonad histology of the Prussian carp <i>Carassius gibelio</i> (Teleostei, Cyprinidae) males from bisexual population in Poland"	<b>3. MP (14hrs) by PhD student - Aleksandra Szabelska, Lech Kitiklis, PhD</b> "The length and chromosomal mapping of 5S rDNA sequence of <i>Carassius gibelio</i> of different ploidy level"

<b>13. 09. (Tuesday)</b> 9:30-11:00 (2hrs)	Lecture by prof. Stanisław Czachorowski " <b>Animals living in Polish inland water bodies; characteristic of the most typical taxa, adaptations and limitations</b> "	
11:00-13:15 (3hrs)	Practical training by prof. Stanisław Czachorowski " <b>Identification of main typical invertebrates taxa inhabiting Polish lakes and rivers</b> " (trip to the Kortowskie Lake; collecting samples)	
13:15-14:15	Lunch	
14:15-17:15 (4hrs)	<b>1. MP (14hrs)</b> by Dorota Juchno, PhD " <b>Gonad histology of the Prussian carp <i>Carassius gibelio</i> (Teleostei, Cyprinidae) males from bisexual population in Poland</b> "	<b>3. MP (14hrs)</b> by PhD student - Aleksandra Szabelska, Lech Kitiklis, PhD " <b>The length and chromosomal mapping of 5S rDNA sequence of <i>Carassius gibelio</i> of different ploidy level</b> "
<b>14. 09. (Wednesday)</b> 9:30-11:00 (2hrs)	Lecture by Lech Kirtiklis, PhD and Olga Jablonska, PhD " <b>Taxonomical identification - a review of the genetic methods</b> "	
11:00-12:30 (2hrs)	Practical training by Lech Kirtiklis, PhD and Olga Jablonska, PhD " <b>Molecular techniques in freshwater animals' taxonomy</b> "	
12:30-13:30	Lunch	
13:30-15:00 (2hrs)	(continuation) Practical training " <b>Molecular techniques in freshwater animals' taxonomy</b> "	
15:00-17:15 (3hrs)	<b>1. MP (14hrs)</b> by Dorota Juchno, PhD " <b>Gonad histology of the Prussian carp <i>Carassius gibelio</i> (Teleostei, Cyprinidae) males from bisexual population in Poland</b> "	<b>3. MP (14hrs)</b> by PhD student - Aleksandra Szabelska, Lech Kitiklis, PhD " <b>The length and chromosomal mapping of 5S rDNA sequence of <i>Carassius gibelio</i> of different ploidy level</b> "
<b>15. 09. (Thursday)</b> 9:30-11:00 (2hrs)	Lecture by prof. Yasuaki Takagi, HU " <b>Bridging the gap between basic research and industry - Studies on efficient use of aquaculture wastes</b> "	
11:00-12:30 (2hrs)	<b>Tour to Inland Fisheries Institute or <i>Danio reiro</i> Laboratory</b> by prof. Alicja BORON and prof. Yasuaki TAKAGI	
12:30-13:30	Lunch	
13:30-15:45 (3hrs)	<b>1. MP (14hrs)</b> by Dorota Juchno, PhD " <b>Gonad histology of the Prussian carp <i>Carassius gibelio</i> (Teleostei, Cyprinidae) males from bisexual population in Poland</b> " - final analysis	<b>3. MP (14hrs)</b> by PhD student - Aleksandra Szabelska, Lech Kitiklis, PhD " <b>The length and chromosomal mapping of 5S rDNA sequence of <i>Carassius gibelio</i> of different ploidy level</b> " - final analysis
15:45-16:30 (1hrs)	All students work together to improve/finish presentation " <b>The language and culture of Japan</b> " - by HU students during the Olsztyn's Days of Science and Art	
<b>16.09. (Friday)</b> 9:30-11:00 (2hrs)	Lecture by prof. Hisae Kasai, HU " <b>Salmonid viral diseases and disease control strategies in Japan</b> "	
11:00-12:30 (2hrs)	<b>Lecture</b> by prof. Dorota Fopp-Bayat, PhD student - Marcin Kuciński " <b>Application of genetic analysis in aquaculture and conservation of sturgeons</b> "	
12:30-13:30	Lunch	

13:30-16:30 (4hrs)	Practical training by prof. Dorota Fopp-Bayat, Marcin Kuciński, PhD student <b>"Analysis of the basic parameters of water quality"</b>	
17:00-19:00	UWM students will take HU students on tour of Olsztyn	
<b>17. 09. (Saturday)</b>	(Students) Trip to Krakow and Wieliczka Salt Mine; to know the culture and tradition of Poland (Professors)	
<b>18. 09. (Sunday)</b>	Professor Takagi and Kasai leaves for Japan (Move to Warsaw, Departure time: 14:25) Arrival of Prof. Takafumi Fujimoto, HU from Prague (Warsaw: Arrival time: 13:55, Move to Olsztyn)	
<b>19. 09 (Monday)</b> 9:30-11:00 (2hrs)	Lecture by prof. Takafumi Fujimoto, HU <b>"Chromosome set manipulation and embryo manipulation..."</b>	
11:00-13:15 (3hrs)	<b>2. MP</b> (20hrs) by PhD student - Anna Przybyl and Anna Leska, PhD "Testosterone concentration in males and females of the Prussian carp <i>Carassius gibelio</i> (Bloch, 1782) from bisexual population in Poland"	<b>4. MP</b> (20hrs) by PhD student - Karolina Kowalewska, dr Olga Jabłońska, PhD <b>"Analysis of DNMT1, DNMT3a, DNMT3b gene expression during embryonic development of the spined loach <i>Cobitis taenia</i>"</b>
13:15-14:15	lunch	
14:45-17:00 (3 hrs)	<b>2. MP</b> (20hrs) by PhD student - Anna Przybyl and Anna Leska, PhD "Testosterone concentration in males and females of the Prussian carp <i>Carassius gibelio</i> (Bloch, 1782) from bisexual population in Poland"	<b>4. MP</b> (20hrs) by PhD student - Karolina Kowalewska, dr Olga Jabłońska, PhD <b>"Analysis of DNMT1, DNMT3a, DNMT3b gene expression during embryonic development of the spined loach <i>Cobitis taenia</i>"</b>
<b>20. 09. (Tuesday)</b> 9:30-11:00 (2hrs) 11:00-13:15 (3hrs)	Tour to the Polish Academy of Sciences in Olsztyn (PAN) Lecture by prof. Andrzej Ciereszko, PAN <b>"Cryopreservation of the fish sperm"</b> Practical training by prof. Andrzej Ciereszko <b>"Cryopreservation of the fish sperm"</b>	
13:30-14:30	lunch	
14:30-17:30 (4hrs)	<b>2. MP</b> (20hrs) by PhD student - Anna Przybyl and Anna Leska, PhD "Testosterone concentration in males and females of the Prussian carp <i>Carassius gibelio</i> (Bloch, 1782) from bisexual population in Poland"	<b>4. MP</b> (20hrs) by PhD student - Karolina Kowalewska, dr Olga Jabłońska, PhD <b>"Analysis of DNMT1, DNMT3a, DNMT3b gene expression during embryonic development of the spined loach <i>Cobitis taenia</i>"</b>
<b>21. 09. (Wednesday)</b> 10:00-11:30 (2hrs)	<b>"The language and culture of Japan" - presentation by Students from the Hokkaido University during The Olsztyn's Days of Science and Art</b>	
11:45-13:15 (2hrs)	<b>2. MP</b> (20hrs) by PhD student - Anna Przybyl and Anna Leska, PhD "Testosterone concentration in males and females of the Prussian carp <i>Carassius gibelio</i> (Bloch, 1782) from bisexual population in Poland"	<b>4. MP</b> (20hrs) by PhD student - Karolina Kowalewska, dr Olga Jabłońska, PhD <b>"Analysis of DNMT1, DNMT3a, DNMT3b gene expression during embryonic development of the spined loach <i>Cobitis taenia</i>"</b>
13:15-14:15	Lunch	

14:15-17:00 (4hrs)	<b>2. MP (20hrs)</b> by PhD student - Anna Przybyl and Anna Leska, PhD "Testosterone concentration in males and females of the Prussian carp <i>Carassius gibelio</i> (Bloch, 1782) from bisexual population in Poland"	<b>4. MP (20hrs)</b> by PhD student - Karolina Kowalewska, dr Olga Jabłońska, PhD "Analysis of DNMT1, DNMT3a, DNMT3b gene expression during embryonic development of the spined loach <i>Cobitis taenia</i> "
<b>22. 09. (Thursday)</b>		
10:00-11:30 (2hrs)	"The language and culture of Japan" - presentation by Students from the Hokkaido University during The Olsztyn's Days of Science and Art	
11:45-13:15 (2hrs)	<b>2. MP (20hrs)</b> by PhD student - Anna Przybyl and Anna Leska, PhD "Testosterone concentration in males and females of the Prussian carp <i>Carassius gibelio</i> (Bloch, 1782) from bisexual population in Poland"	<b>4. MP (20hrs)</b> by PhD student - Karolina Kowalewska, dr Olga Jabłońska, PhD "Analysis of DNMT1, DNMT3a, DNMT3b gene expression during embryonic development of the spined loach <i>Cobitis taenia</i> "
13:15-14:15	lunch	
14:15-15:45 (2hrs)	<b>2. MP (20hrs)</b> by PhD student - Anna Przybyl and Anna Leska, PhD "Testosterone concentration in males and females of the Prussian carp <i>Carassius gibelio</i> (Bloch, 1782) from bisexual population in Poland" - final analysis	<b>4. MP (20hrs)</b> by PhD student - Karolina Kowalewska, dr Olga Jabłońska, PhD "Analysis of DNMT1, DNMT3a, DNMT3b gene expression during embryonic development of the spined loach <i>Cobitis taenia</i> " - final analysis
15:45-17:00 (2hrs)	Preparation of the final presentation of the results of two realized Mini-Projects (#1, #2); (PhD student - A. Przybyl and A. Leska, PhD; D. Juchno, PhD)	Preparation of the final presentation of the results of two realized Mini-Projects (#3, #4); PhD student - A. Szabelska, L. Kitiklis, PhD; PhD student - K. Kowalewska, dr O. Jabłońska, PhD
<b>23.09. (Friday)</b>		
10:00-11:30 (2hrs)	Preparation of the final presentation of the results of two realized Mini-Projects (#1, #2); (PhD student - A. Przybyl and A. Leska, PhD; D. Juchno, PhD)	Preparation of the final presentation of the results of two realized Mini-Projects (#3, #4); PhD student - A. Szabelska, L. Kitiklis, PhD; PhD student - K. Kowalewska, dr O. Jabłońska, PhD
11:30-13:00 (2hrs)	All Students; Seminar by prof. Alicja BORON and prof. Takafumi FUJIMOTO; <b>Final presentation and discussing of the results of Mini-Projects.</b>	
13:00-14:00	Lunch	
14:00-15:30 (2 hrs)	All Students; Seminar by prof. Alicja BORON and prof. Takafumi FUJIMOTO; <b>Final presentation and discussing of the results of Mini-Projects.</b>	
15:30-15:45	<b>End of the Summer course</b>	
16:00 - ∞	Farewell party;	
<b>24.09. (Saturday)</b>		
	<b>Move to Warszawa and stay one night, and then leave for Japan (25.09 (Sunday)).</b>	

**Running the summer course and excursion for 10 days (excluding weekend) with 7 to 9 hours (in only two days) of lectures/training courses/seminars in each days**

**1. In total during the Summer Course will be given 118 hours of different activities as following:**

- a) 16 hours (16 x 45') of lectures,
- b) 14 hours of practical training (warsztaty),
- c) 68 hours of scientific research realizing as four Mini-Projects (cwiczenia),
- d) 14 hours of seminars and meetings,
- e) 4 hours giving "The language and culture of Japan" - presentation during The Olsztyn's Days of Science and Art,
- f) 2 hours of visits.

**2. Each Student-Participant will get 4 ECTS points (in UWM) = 2 credits (in HU) and take part in 80 hours of different activities as following:**

- a) 16 hours (16 x 45') of lectures,
- b) 14 hours of practical training (warsztaty),
- c) 34 hours of scientific research realizing as two Mini-Projects (cwiczenia),
- d) 10 hours of seminars and meetings,
- e) 4 hours giving "The language and culture of Japan" - presentation during The Olsztyn's Days of Science and Art,
- f) 2 hours of visits.

**Total number of hours of lectures, training courses, seminars for each of Student-Participant and also in each working day during the Summer Course**

Day	lectures	Mini-Projects realization	practical training	seminars, meetings, presentations/ preparation, visit	Total hours
<b>12. 09. (Monday)</b>	2	5	-	1	8
<b>13. 09. (Tuesday)</b>	2	4	3	-	9
<b>14. 09. (Wednesday)</b>	2	3	4	-	9
<b>15. 09. (Thursday)</b>	2	3	-	3	8
<b>16.09. (Friday)</b>	4	-	4	-	8
<b>19. 09 (Monday)</b>	2	6	-	-	8
<b>20. 09. (Tuesday)</b>	2	3	3	-	8
<b>21. 09. (Wednesday)</b>	-	6	-	2	8
<b>22. 09. (Thursday)</b>	-	4	-	4	8
<b>23.09. (Friday)</b>	-	-	-	6	6
<b>Total 80</b>	<b>16</b>	<b>34</b>	<b>14</b>	<b>16</b>	<b>80</b>