



# International Summer School 2022

27. 6. – 22. 7. 2022

## Program

### 27<sup>th</sup> June (Mo) – MEVPIS (Reception, arrivals)

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10:00 – 17:00 Registration, check-in

### 28<sup>th</sup> June (Tu) – MEVPIS (classroom, ground floor), FFPW USB

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8:30 – 9:00 **Lecture:** History and present of the FFPW USB (PaedDr. Jiří Koleček)

09:00 – 9:30 **Lecture:** Safety training in laboratories (Dipl. – Ing. Kateřina Grabicová, Ph.D.)

09:30 – 10:30 **Lecture:** My experience with the International Summer School and the FFPW USB (Anil Axel Tellbüscher, MSc.)

10:30 – 11:00 Administration (Adéla Minaříková)

11:00 – 12:00 Lunch

12:00 – 12:30 **Lecture:** Czech Fisheries (MSc. Oleksandr Malinovskyi, Ph.D.)

12:30 – 13:00 **Lecture:** Algae4Fish (MSc. Oleksandr Malinovskyi, Ph.D.)

13:00 – 16:00 **Excursion:** FFPW USB facilities (Experimental Fish Culture and Facility, Genetic Fisheries Center) (MSc. Oleksandr Malinovskyi, Ph.D.)

### 29<sup>th</sup> June (We) – LABORATORIES

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08:30 – 18:00 Meeting with the heads of the summer school projects, start of work on projects

### 30<sup>th</sup> July (Th) – LABORATORIES

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08:30 – 18:00 Work on projects

### 1<sup>st</sup> July (Fr) – LABORATORIES

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08:30 – 18:00 Work on projects





## 2<sup>nd</sup> July (Sa), 3<sup>rd</sup> July (Su) – WEEKEND

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Free program according to interests of students.

## 4<sup>th</sup> July (Mo) – LABORATORIES

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08:30 – 18:00 Work on projects

## 5<sup>th</sup> July (Tu), 6<sup>th</sup> July (We) – PUBLIC HOLIDAY

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Free program according to interests of students.

## 7<sup>th</sup> July (Th) – LABORATORIES

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08:30 – 18:00 Work on projects

## 8<sup>th</sup> July (Fr) – MEVPIS (classroom, ground floor)

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08:30 – 09:30 **Lecture:** Crayfish diversity in Europe, origin of crayfish, historical biogeography, present status and possible threats (Assoc. Prof. Dipl. – Ing. Martin Bláha, Ph.D.)

09:30 – 10:30 **Lecture:** Marbled crayfish, an emerging invasive species (Assoc. Prof. Dipl. – Ing. Antonín Kouba, Ph.D.)

10:30 – 11:30 **Lecture:** Anthropogenic factors affect the composition of stream macroinvertebrate communities – case study (Dipl. – Ing. Marek Let)

12:30 – 13:15 **Lecture:** Polyploidy in sturgeons (Dipl. – Ing. Martin Hubálek)

13:15 – 14:15 **Lecture:** Hybridization and link to asexuality in fish taxa: evolutionary view (Tomáš Tichopád, MSc.)

14:30 – 15:30 **Lecture:** Effects of drugs on fish (Christoph Steinbach, Dipl. Biol., Ph.D.)

15:30 – 16:15 **Lecture:** Xenopus Laevis/Tropicalis in Aquatic Toxicology (Dipl. – Ing. Michal Pech)

## 9<sup>th</sup> July (Sa), 10<sup>th</sup> July (Su) – WEEKEND

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Free program according to interests of students.

## 11<sup>th</sup> July (Mo) – LABORATORIES

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08:30 – 18:00 Work on projects





## 12<sup>th</sup> July (Tu) – LABORATORIES

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08:30 – 18:00 Work on projects

## 13<sup>th</sup> July (We) – EXCURSION TŘEBOŇ

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08:30 Departure from the MEVPIS parking place (Dipl. – Ing. Nikola Třešňáková)

09:30 Introduction

9:45 – 10:15 **Lecture:** Microalgae culturing: From laboratory to large-scale Outdoor cultivation (prof. Jiří Masojídek)

10:15 – 10:45 **Lecture:** Algae4Fish - Introduction into the project and insight into the results (Dipl. – Ing. Karolína Ranglová, Ph.D.)

10:45 – 11:30 **Lecture:** History of algal biotechnology (Richard Lhotský, Ph.D.)

11:30 – 13:00 **Excursion:** Algatech Třeboň

13:00 Lunch, town sightseeing

16:00 Departure from Třeboň

## 14<sup>th</sup> July (Th) – EXCURSION NOVÉ HRADY, ČESKÉ BUDĚJOVICE

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08:30 Departure from the MEVPIS parking place (Adéla Minařková)

10:00 **Excursion:** Institute of Complex Systems FFPW USB (Dipl. – Ing. Petr Císař, Ph.D.)

12:00 Lunch

14:00 – 15:00 **Excursion:** Institute of Aquaculture and Protection of Waters FFPW USB (Dipl. – Ing. Radek Gebauer, Ph.D.)

## 15<sup>th</sup> July (Fr) – LABORATORIES

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08:30 – 09:30 **Lecture:** Spermatogenesis and spermatogonia stem cells in fish: cellular basis and molecular regulation (Assoc. Prof. Rafael Henrique Nobrega, MSc., Ph.D.)

09:30 – 10:30 **Lecture:** Surrogate reproduction in fish (Assoc. Prof. Dipl – Ing. Martin Pšenička, Ph.D.)

10:30 – 18:00 Work on projects

## 16<sup>th</sup> July (Sa), 17<sup>th</sup> July (Su) – WEEKEND

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Free program according to interests of students.





## 18<sup>th</sup> July (Mo) – MEVPIS (classroom, ground floor)

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08:30 – 09:30	<b>Lecture:</b> Basics of fish sperm motility (Serhii Boryshpolets, MSc., Ph.D.)
09:30 – 10:30	<b>Lecture:</b> The role osmolality and ions in spermatozoa activation in different fish species: general aspects and some recent updates (Olga Bondarenko, MSc., Ph.D.)
10:45 – 11:30	<b>Lecture:</b> Sperm-Egg Interaction in Fish (Vitaliy Kholodnyy, MSc. Ph.D.)
11:30 – 12:30	<b>Lecture:</b> DNA damage in fish gametes and embryos: enemy or ally? (Ievgeniia Gazo, MSc., Ph.D.)
13:30 – 14:30	<b>Lecture:</b> Introduction to zebrafish model (Dipl. – Ing. Roman Franěk, Ph.D.)
14:30 – 15:30	<b>Lecture:</b> Fish embryogenesis (Dipl. – Ing. Roman Franěk, Ph.D.)
15:45 – 16:45	<b>Lecture:</b> RNAseq technology and the application in fish transcriptomics: bulk and single-cell analysis (Tomáš Tichopád, MSc.)

## 19<sup>th</sup> July (Tu) – LABORATORIES

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08:30 – 18:00	Work on projects
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## 20<sup>th</sup> July (We) – LABORATORIES

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08:30 – 18:00	Work on projects
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## 21<sup>st</sup> July (Th) – LABORATORIES

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08:30 – 18:00	Preparation of the final presentations
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## 22<sup>nd</sup> July (Fr) – MEVPIS (large lecture hall, 1<sup>st</sup> floor)

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08:30	Presentations of the ISS 2022 participants (coffee breaks included)
14:15	The best project presentations award, handover certificates
from 15:00	Departure

\* All lectures will be held at the MEVPIS centre  
\*\*The program subject to change

