

INTERNATIONAL SUMMER SCHOOL

# „BATTERY CAMP“

15.6.-19.6.2020

VSB-TU OSTRAVA, 17.LISTOPADU 15, OSTRAVA PORUBA  
CZECH REPUBLIC



**Keywords:** accumulation, chemical batteries, other types of energy accumulation, battery charging, control of traction batteries for electric vehicles.

**Graduation:** 2ECTS credits

**Fee:** 300 €

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**Info:** [www.vsb.cz/summer-school](http://www.vsb.cz/summer-school)

## Annotation:

This course is oriented on the use of chemical batteries for accumulation of energy for future of family homes, small communities and transportation means. The academic programme offers interdisciplinary knowledge in the fields of energy, accumulation techniques and electromobility for independence and sustainability. The course is designed for students and wide public in the field of energetics, electrical and mechanical engineering, civil engineering, architecture and urban planning, safety engineering, municipal development and engineering. The summer school offers an intensive course for all of those who are interested in sustainable development, permaculture, sustainable energetics, electrochemistry, control technologies and energy accumulation techniques. The programme is based on lectures and site visits together with a workshop on a selected topic and presentations of course participants. Lectures will consist of theoretical fundamentals followed by practical exercises that will demonstrate methods and tools for development, planning, measuring and evaluation battery accumulation units. The laboratory experiments will be based on equipment of Prototype laboratory and Common Research and Development working place for Electromobility KAIPAN.

## Preliminary Time Schedule:

### Monday

09:00-11:30 Lecture „Accumulation, consumption, chemical batteries, control systems“  
11:30-12:30 Lunch  
13:00-18:00 Practical training „Power bank“ realization 1“.  
18:00-21:00 Dinner, free program, discussion „Ecological aspects of energy accumulatin technologies“.

### Tuesday

09:00-11:30 Practical training „Power bank“ realization 2“.  
Alt. Lecture „Geothermal systems“ (building CPIT lecture room V101)  
11:30-12:30 Lunch  
13:00 Depart to Český Těšín (from student dormitories parking place)  
13:45-15:30 Excursion Trianon / Common research and monitoring centre „Family homes independent on energies and water“  
15:30 Depart to Ostrava  
16:15-18:30 Alt. Exkursion VŠB-TUO „Heat exchanger of heat-pumps system VŠB-TUO“  
18:30-21:00 Dinner, free program, discussion „Household energy consumption, student thesis for final workshop - friday“.

### Wednesday

08:30-18:00 ISS VSB-TUO common program (Kopřivnice, TATRA museum, Beskydy, Pustevny – depends on weather).  
18:00-21:00 Social party (start from C112 laboratory), discussion „Industrial region / knowledge region – ecological and social aspects“.

### Thursday

09:00-11:30 Lecture „Energy accumulation with hydrogen by-production“ (building CPIT, lecture room V101).  
11:30-12:30 Lunch  
13:00 Depart to Vítkovice (from student dormitories parking place)  
13:30-15:30 Excursion Centrum ENET „ENET Technologies“  
15:30 Depart to Ostrava-Poruba  
Discussion „Hydrogen use problems“.  
18:30-21:00 Dinner, free program, workshop contributions / presentations preparation.

### Friday (alternate program)

05:00 Depart to Smržovka (from student dormitories parking place)  
10:00-11:00 Excursion CRWPE Kaipan, Smržovka (CRWPE Common Research Working Place for Electromobility)  
10:00-11:30 Lecture „Electric vehicles, history, infrastructure, charging / discharging, charging stations“ (building CRWPE Kaipan, Smržovka).  
10:30-11:30 Break, final test, workshop preparation.  
11:30-14:00 ISS students workshop, presentations of ISS participants.  
Certificate handover, official ISS closing.

### Notice:

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