

Upper Secondary School of Chemistry Pardubice

11.04.2024





Pardubice

Where are we at?

- Around 90.000 inhabitants
- Industries: **Chemistry, Electric Engineering and Mechanical engineering**
- Deep sport and cultural traditions
- **Railway and Airport**





Pardubice - famous

- Perník - City of **Gingerbread**
- The famous **Velká pardubická** (Great Pardubice) steeplechase
- **Golden Helmet of Pardubice** (since 1929) - motorcycle speedway
- **Ice hockey** club Dynamo Pardubice





SPSCH Pardubice

Who are we?

- State VET school with more than 70 years of tradition
- Around 1050 students , 159 staff (122 teachers)
- Some fields are unique not only in the region, but also on a national scale
- Lifelong Learning Center, VET Erasmus+ Charter (2018), VET Accreditation (2020)
- Internationalisation since 1997



CHEMISTRY



HAIRDRESSING

FIRE PROTECTION



SECURITY AND LAW











Let's review more in details: Chemistry

Following information is giving more details about Chemistry related study specialisations

Applied Chemistry (4 years)

Specialisations:

- Analytical Chemistry
- Chemical-Pharmaceutical Production
- Analysis of Chemical and Biological materials
- Forensic Techniques and Expertise



Applied Chemistry (4 years study)

Vocational subjects:

1st year: General and inorganic chemistry

2nd year: Organic chemistry, Analytical chemistry I, Chemical technology

3rd year: Analytical chemistry II, Biochemistry, Microbiology, Chemical technology, Chemical engineering, Physical chemistry I

4th year: Instrumental analysis, Chemical engineering II, Chemical technology, Physical chemistry II,

Practical vocational skills:

All theoretical classes are accompanied with particular laboratory exercises. Altogether up to 12 hours per week, 1 month of vocational practice in chemical companies in 3rd year of study.



Applied Chemistry (4 years)

Examples of laboratory work:

- **1st year: basic laboratory operations** destillation, crystalization, filtration, precipitation, preparation of basic inorganic compounds such as $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$, etc..
- **2nd year: qualitative analytical chemistry** : (cations, anions); **quantitative** : gravimetry (Fe, Ni, glucosis), **volumetry** (acid-base titration); **organic chemistry** : preparation of organic substances (dimethylsulfone, halogenderivates, acetylsalicylic acid, pharmaceuticals, etc..
- **3rd year: analytical chemistry** : advanced volumetry (precipitation, complexometry, redox), instrumental analysis I; **microbiology** : microscope work, preparing of microbiology matrices, inoculation, determination of microorganisms, etc.; **physical chemistry** : determination of physical constants: viscosity, density, surface tension, calorimetry, cryoscopy, etc.; **chemical engineering** : dilatation, danaida, heat transfer, drilling and sieve analysis, rectification, diferencial distilation, etc.



Applied Chemistry (4 years)

Examples of laboratory work:

- **4th year: Instrumental analysis** : Determination of Pb in soil by FAAS, Raman spektrometry – creating of library, spectra overaly, XRF elemental analysis of minerals, GC of volatile alcohols in spirits, HPLC of food conservants, CE of cations in wine, UV-VIS spectrometry of different polutants, electrogravimetry, potenciometry of nitrates in vegetable, conductometry, etc..

Chemical engineering and physiscal chemistry II: advanced laboratory exercises



School Facilities

- Modern classrooms
- Modern chemical laboratories
- Advanced instrumental analysers and chemical equipment
- Library
- Gym
- Fitness gym
- School playground
- Canteen
- Laser shooting range and criminology lab
- Fire training tower
- 2 hairdressing and beauty salons
- EdTechLab Pardubice



Cooperation

- Strong connection with the region and nationally as well
- Various fields and initiatives
- We look for partnership in:
 - Teachers' job shadowing placements
 - Learners' training opportunities
 - International competitions

We are open to discuss various cooperation forms.



International projects

This academic year

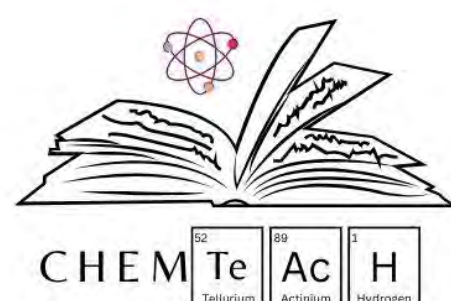


Green
Chemistry



Funded by the
European Union

2023

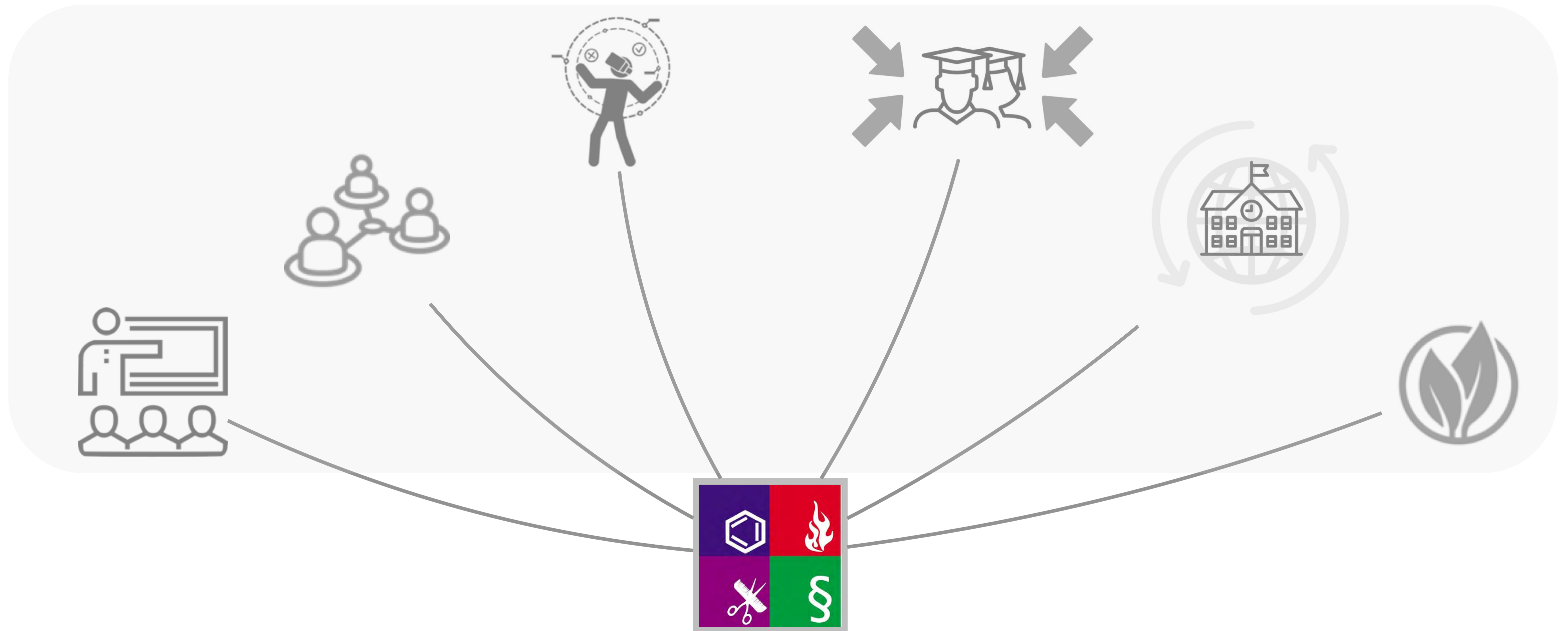


School life, after school activities

- Excursions
- Winter and summer outdoor courses
- Open doors
- Road shows for primary schools
- Exhibitions and science festivals
- Competitions and Olympics
- Various student clubs: criminalistic, biology, chemistry, critical thinking, basketball, volleyball



Future



Networks

- The European Credit system for Vocational Education and Training (ECVET)
- European Chemistry Thematic Network Association (ECTN)
- The European Forum of Technical and Vocational Education and Training (EfVET)
- National Qualifications Framework (NQF)
- Praxis Network
- Is part of the Sectoral Agreement in Chemistry in CZ
- XR Effect Foundation





Upper Secondary School of Chemistry Pardubice

school with tradition since 1946



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