

ELECTROMECHANICAL SCHOOL

Varaždin



WELCOME

27.10.2022



Electromechanical school

Who am I?

- Igor KOS
- I was a **student** of the Electromechanical **School**
- **Graduated** from the ***Faculty of Organization and Informatics*** Varaždin (www.foi.hr)
- I was a **teacher** at the Electromechanical **School**
- since 2008 - **principal** of the School
- I 'm satisfied with my job (***excellent team***)





ELECTROMECHANICAL SCHOOL



- 7.000 m²
- 46 classes
- 1030 students, 150 employees
- one shift (7:20-15:40)



Electromechanical school

ELECTROMECHANICAL SCHOOL - programs

	4 years	3 years
Electrical engineering	Electrical technician	Electrician
	Computer technician	Electro mechanic
	Electronics technician	Car electrician
		Electronics mechanic
Mechanical engineering	Mechatronics technician	Locksmith
		Turner
Graphics / Multimedia	Media technician	Printmaker (preparation)
	Web designer	Printmaker (print)
	Graphics technician	
	Graphics designer	
Postal logistic	Postal and Financial Services Technician	

46 classes
1030 students

Adult education (courses); retraining, continuing education



ELECTROMECHANICAL SCHOOL

➤ Good school?

1. **Facilities** (*proper working place, buildings*)
2. **Equipment** (*computers, robots, smart tables, etc.*)
3. **PEOPLE** (*students, teachers, other employees*)
4. **ORGANISATION** → *Development strategy*





ELECTROMECHANICAL SCHOOL

Be Bold
Or Italic
NEVER REGULAR

Centres of
EXCELLENCE

Deveploment
strategy

Cooperation with
companies

Usefull knowledge
**(workshops/
practicums)**





ELECTROMECHANICAL SCHOOL

WHAT

- **Conditions**
(*equipment, spaces*)
- „hardware”

HOW

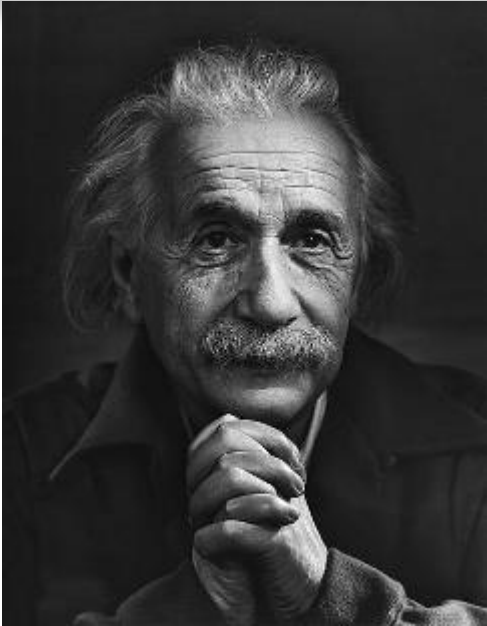
- **Pro**activities
- Cooperation (EU)

WHY

- **Upbringing** and education
- Future is in our hands



ELECTROMECHANICAL SCHOOL



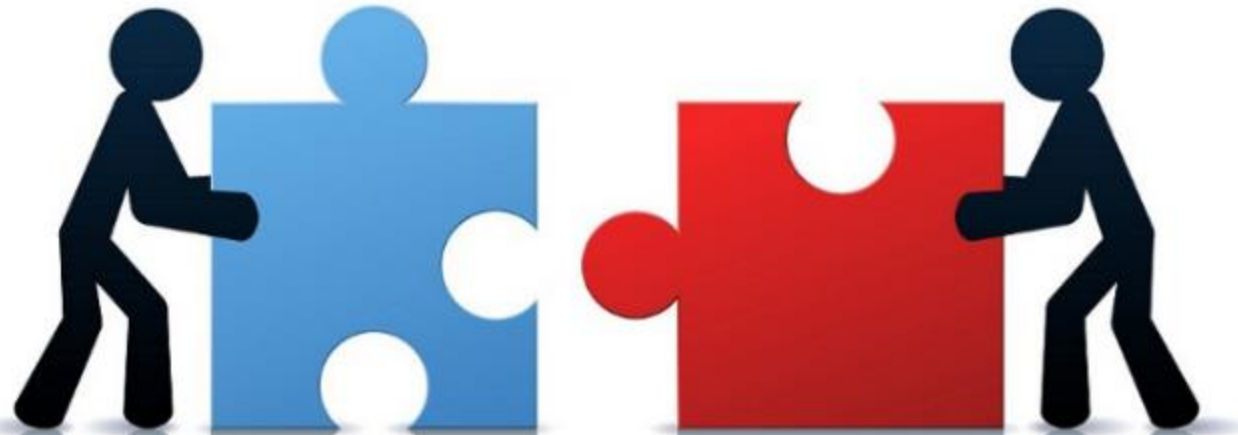
Albert Einstein

Theory - *when you know everything but nothing works.*

Practice - *everything works but no one knows why*

Very important is the **combination** of **theory** and **practice!**

The most important is **applicable** knowledge.





ELECTROMECHANICAL SCHOOL

Classrooms
&
Labs

Smart boards



Tablets



600 computers, laptops

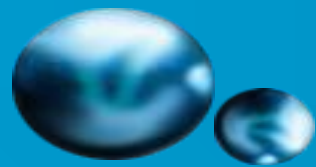




ELECTROMECHANICAL SCHOOL

New classroom for the **development of video games**





ELECTROMECHANICAL SCHOOL

New classroom for the **development of video games**





ELECTROMECHANICAL SCHOOL

New classroom for the **development of video games**



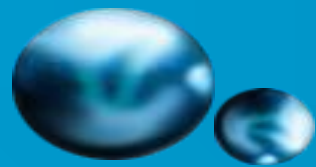
elective module (3rd and 4th grade)



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Graphic workshop





ELECTROMECHANICAL SCHOOL

Graphic workshop





ELECTROMECHANICAL SCHOOL

Graphic workshop



Digital printing - printing via a printer connected to a computer.



Offset printing (classic)



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Grafic workshop



Students produce: *books, leaflets, brochures, etc.*



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MECHANICAL WORKSHOP



CNC machines



Classical machines



Electromechanical school

Mechanical workshop



Computer numerical control (CNC) machines

CNC machining → process in which *pre-programmed computer software dictates* the movement of factory machinery and tools.

Result: manufacturers can produce parts in **less time**, **reduce waste** and **eliminate** the **risk** of **human error**.



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MECHANICAL WORKSHOP



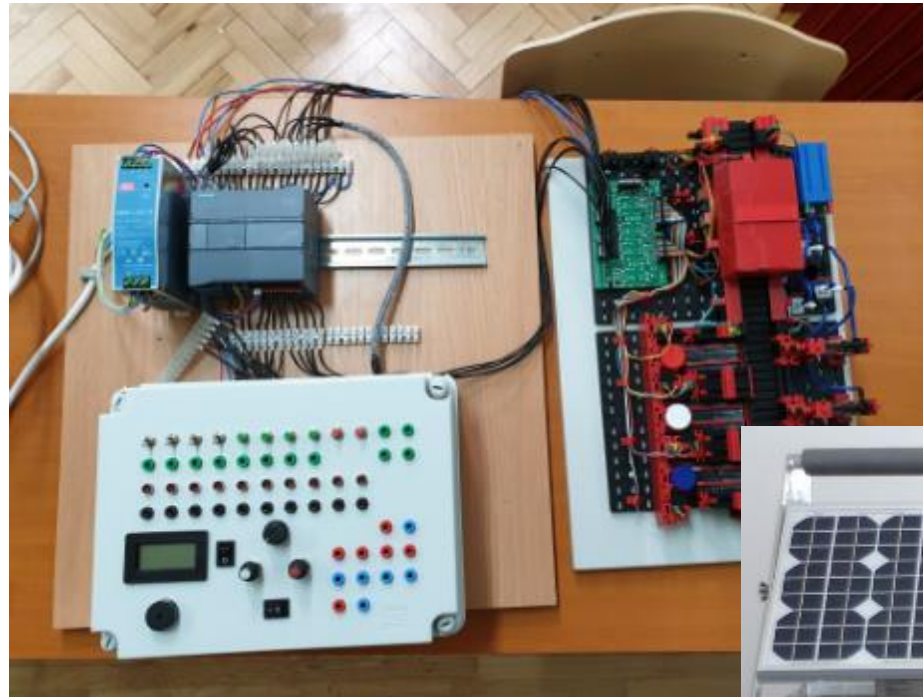
CNC, adult education

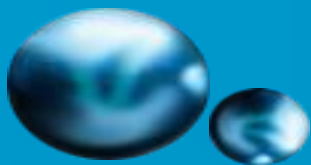
School is **SIEMENS** partner



ELECTROMECHANICAL SCHOOL

Elektro workshops/laboratories





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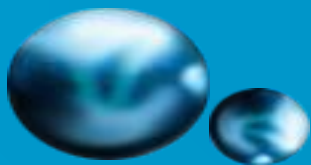
CENTERS OF EXCELLENCE in VARAŽDIN COUNTY (11 CoE)



[\(https://www.civz.hr/en/\)](https://www.civz.hr/en/)



<https://echa-site.eu/>



ELECTROMECHANICAL SCHOOL

➤ CENTERS OF EXELENCE

ELECTROMECHANICAL SCHOOL (5)

1. **PHYSICS** (2008)
2. **ASTRONOMY** (2022)
3. **CROATIAN LANGUAGE** (2010)
 - ❖ 1st School television
 - ❖ School radio (*New wave*)
4. **VOCATIONAL CENTER OF EXCELLENCE FOR ELECTROTEHNICS (*NEW TECHNOLOGIES*)** (2013, 2022)
5. **ROBOTICS** (2022)



Program for:

- **Kindergartens** (3-7y.)
- **Primary s.** (7-15 y.)
- **High s.** (15-18 y.)
- **Comapanies**



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➤ Center of excellence – Croatian language





ELECTROMECHANICAL SCHOOL

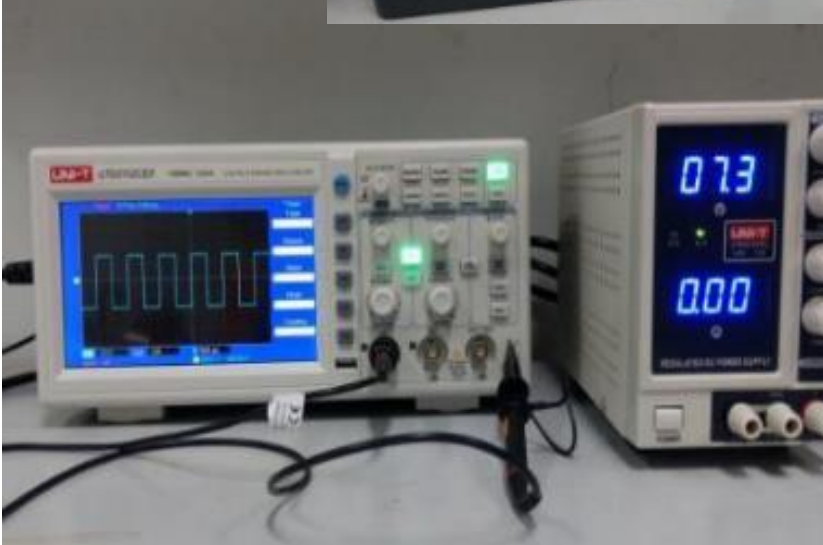
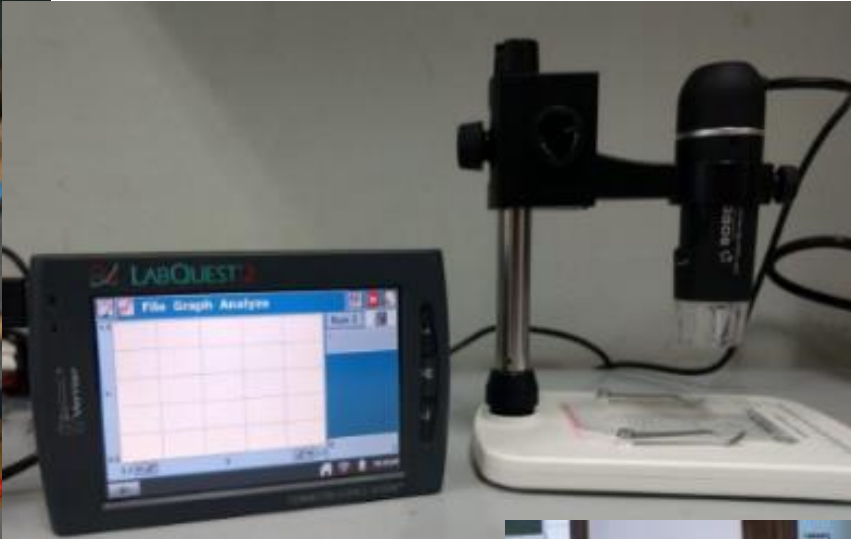
➤ Center of excellence – **Croatian language**

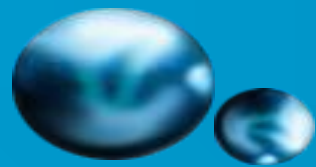




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➤ CENTER OF EXCELLENCE - PHYSICS

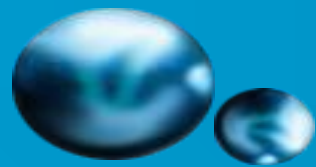




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➤ Center of excellence ASTRONOMY





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➤ Center of excellence – PHYSICS





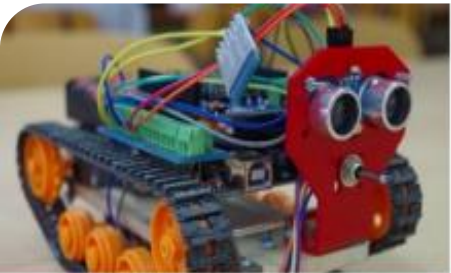
ELECTROMECHANICAL SCHOOL

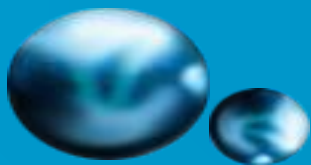


Vocational Center of Excellence
for **Electrical Engineering**

**New
tehnologies**

ROBOTICS





Vocational Center of Excellence for Electrical Engineering

STRUKOVNI CENTAR IZVRSNOSTI
ZA ELEKTROTEHNIKU

- 2D/3D design and prints
- **Internet of things (IoT)**
- **Microcontrollers, Automatics**
- Renewable energy
- Basic robotics and graphic programming
- **Assembling of robots** (*npr. rescue labyrinth*)
- Programming (*RCJ Soccer, MRMS robot 3*)
- industrial robotics and automation
- **humanoid robots**
- Laboratory for digital fabrication

- ✓ Production of **EDUCATION**
EQUIPMENT for schools
(*kindergarten, primary, Shighschools*)
- ✓ **RESEARCH, INOVATIONS**
(*companies*)



ELECTROMECHANICAL SCHOOL

Vocational
Center of
Excellence
for
Electrical
Engineering





ELECTROMECHANICAL SCHOOL

EU projects – International cooperation

- Austria
- Belgium
- ✓ Bulgaria
- Croatia
- ✓ Cyprus
- Czech Republic
- ✓ Denmark
- ✓ Estonia
- ✓ Finland

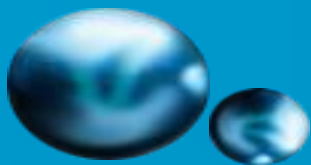
- ✓ France
- ✓ Germany
- ✓ Greece
- ✓ Hungary
- ✓ Ireland
- ✓ Italy
- Latvia
- Lithuania
- Luxembourg
- Malta

- ✓ Netherlands
- ✓ Poland
- ✓ Portugal
- ✓ Romania
- ✓ Slovakia
- ✓ Slovenia
- ✓ Spain
- ✓ Sweden
- ✓ United Kingdom
- ✓ Turska
- ✓ Makedonija
- ✓ Srbija



INNOTECs
INTERNATIONAL NETWORK OF
TECHNICAL SCHOOLS

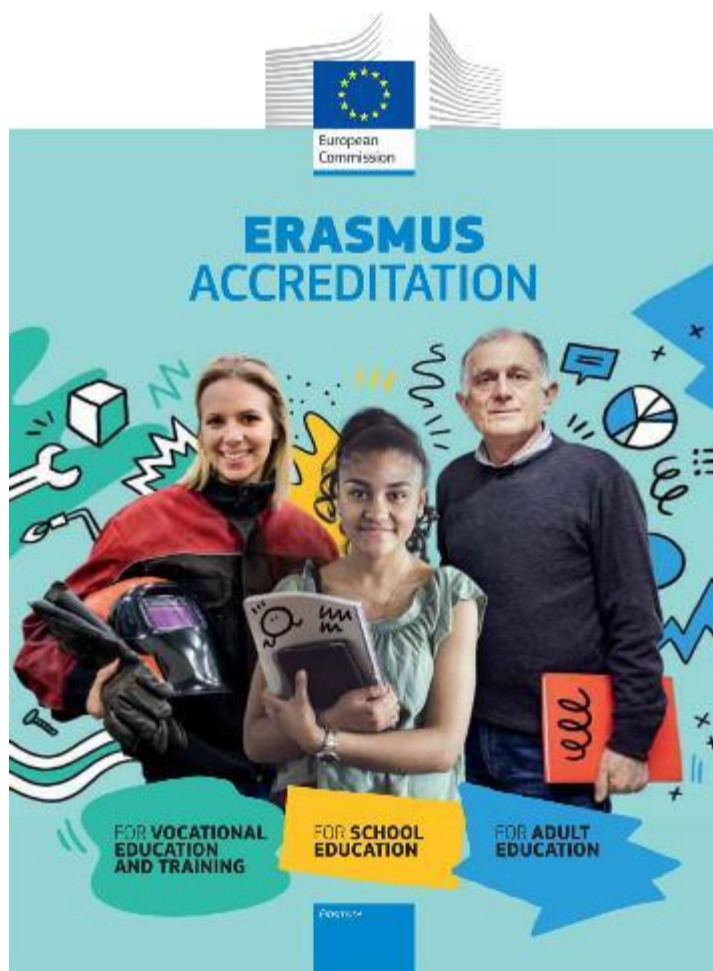
~50 EU projects



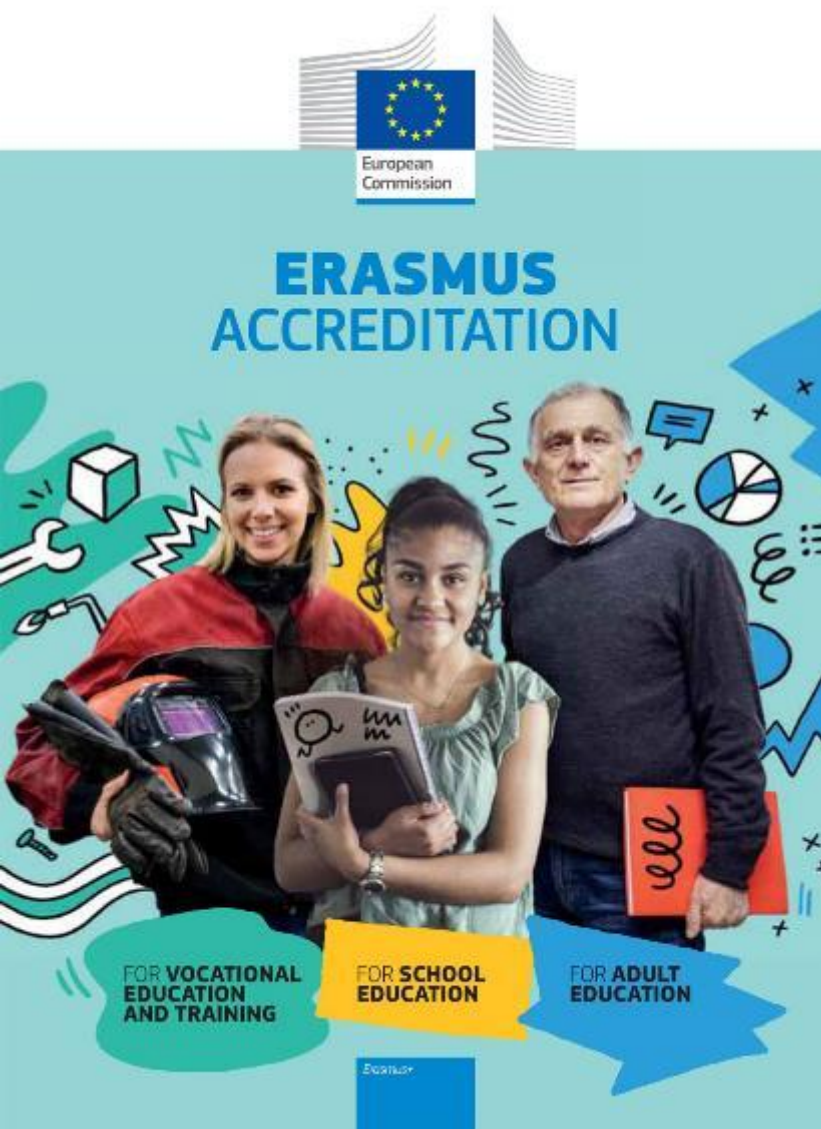
EU projects – International cooperation

➤ Erasmus+ Accreditation

- We have a **guaranteed** budget for **student and teacher mobility** (2022. – 2027.)



1) Erasmus+ Accreditation 2022 – 2027.



✓ 2022. year - granted 77.680,00 €

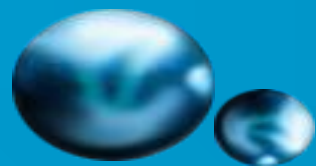
❖ **Student mobility**

- 24 students
- *4 teachers*
- 12 days + 2 travelling days

❖ **Teachers mobility**

- 8 teachers
- 5 days + 2 travelling days
- *education, workshops, conference, Job shadowing*

❑ **deadline – 31.08.2023.**



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Erasmus+ projects





ELECTROMECHANICAL SCHOOL

WHY?



Upbringing

Moral values

Motivation

EDUCATION

New technologies

Excellence



connect and balance



using technology
without moral values
is dangerous!

Thank you for your attention



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