



# SOFIA VOCATIONAL HIGH SCHOOL OF ELECTRONICS"JOHN ATANASSOV"



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ДОБРЕ ДОШЛИ!

WELCOME!

WILLKOMMEN!

BIENVENUE!

BENVENUTI!

VÄLKOMMEN!





# Classes

We have 995 students, distributed in 39 classes. Our students start their education at the high school after taking entrance exams after graduating the seventh grade and study up to the twelfth grade (from the age of 15 to 19).





We are a public vocational high school. Since its foundation in 1968, the school has been one of the educational leaders acclaimed by the National ranking System. The school offers education and training in the field of Information Technology with specialties, such as:

- *System Programming,*
- *Computers and Technology,*
- *Computer Networks,*
- *Renewable Energy Sources,*
- *Microprocessor Technology,*
- *Industrial Electronics.*





# Education



They are enrolled in intensive foreign language training (English or German) and a second foreign language course. They obtain their diplomas only after taking matriculation exams. The school is situated in ***modern, well equipped premises*** in the central part of the capital city, Sofia, Bulgaria.





# Results

- The vocational education after the 12 grade ends up with taking national examinations in theory and practice of the profession.
- The national examinations in theory and practice of the profession are carried out according to national examination programs in conformity with the national educational requirements for acquisition of qualification in the profession. The estimation of the professional competences in the two examinations is independent and is done according to uniform national criteria.
- Students who have successfully taken the national examinations after finished 12 grade **receive III qualification degree**. The completed vocational education is certified by **PROFESSIONAL QUALIFICATION CERTIFICATE**.



# THE PROFESSIONS



# Profession: Electronics technician



*Traditional specialties.*





# Profession “Electronics Technician”

The profession of “Electronics technician” with its two specialties – Industrial Electronics and Microprocessor Technology is a basic profession in the school since its founding.

Since 1968 up to now **11 078** students have graduated from our school. Over 60% of them are from these specialties .



# PROFESSION “ELECTRONICS TECHNICIAN”

Profession “Electronics technician” with its two specialties "Industrial electronics" and "Microprocessor" is a basic profession of the school since its founding.

From 1968 to now they have completed 11,078 students. Over 60% of them are from these specialties.



# The Speciality “Industrial Electronics”

The students who have completed this speciality master the structure and the principle of operation of various electronic devices, they can detect and remove defective electronic component or node; they know methods of mechanical and chemical processing of semiconductor materials for the construction of semiconductor and microelectronic circuits.



# Specialty "Microprocessor Technology"

Trainees in "Microprocessor technology" know the types of microprocessors to build intelligent control systems as well as the structure and the principle of operation of microprocessor systems for collection, data processing and management of production processes. They can install, operate, and troubleshoot microprocessor systems.



# DUAL TRAINING

The education in these specialities so far has been the standard class-lesson form. We are currently working on the introduction of dual training for the specialty "Industrial Electronics". Employers are very interested in it.

# DUAL TRAINING

In this project we maintain very firm connections with "Festo Production" LTD, which, for many years, has partnered with us providing real workplace practices. The company has a great interest in having qualified staff, and even now we are training their workers in some subjects as part of the profession.





# DUAL TRAINING

Dual training will be useful for:

- ➡ Companies – they receive qualified staff for their specific productions
- ➡ Students – they acquire knowledge, skills and competencies, which provide them with a high rating at the labor market.

# WHAT IS MODULE EDUCATION?



- Module education is an alternative of the subject form of vocational education. It is planned education.
- In vocational modules education vocational competences are reached by standards of the particular modules. There is a developed curriculum for every module, in which the content studied is described in details for weeks and classes. Modules can be theoretical, practical or modules that include both theory and practice. The practical classes are carried out by dividing the class into two or three groups according to the kind of the module.



# WHAT IS MODULE EDUCATION?

The evaluation is objective because it is done by a test form and is carried out through theoretical and practice tests. At the beginning of the module students are being informed about the number and the kind of tests which are included in a particular module. The teacher develops a rating scale for every test and marks it according to the gained points. The test is considered successfully passed if 50% from the maximum points are gained.



# WHAT IS MODULE EDUCATION?

Every test has a definite weight in the forming of the final mark for a particular module. Students who receive a poor mark at the first test have the right to take the test again after one or two weeks on the appointed reserve date, declared by the teacher of the module. In case of a second poor mark, the student sits a supplementary examination only for those tests which are not successfully taken at the reserve date.



# WHAT IS MODULE EDUCATION?

- The documentation for every module– tests of the teacher, tests of the students, protocols for the current and final marks- is kept by the teacher during the whole educational process. This documentation is checked by the methodologist of the profession and is preserved one year after finishing a particular educational module.
- The methodologists of the profession give the teachers of the module education methodological assistance through the educational process. They visit particular theory and practice classes in order to give directions and if necessary to support the teachers' work with the purpose to raise the quality of the educational process and reach better final results.

# Profession "Technician of Computer Systems"



There are two specialties, studied in the profession of "Technician of Computer Systems":

*Computer Networks*

*Computer Technics and Technologies – module education*

- To observe the technological succession in the execution of a particular operation;
- To read technical documentation, reference, catalog literature and normative documents of the computer modules, computer system and the computer network; To work with measuring devices and different kinds of manual instruments;
- To identify the components of the computer system;
- To know the technical and specific characteristics of the components of the computer system(CS) and the network hardware;



## Profession "Technician of Computer Systems"

- To know the functional and structure connections between the components of the CS and the computer network;
- To know the kinds of topologies for the local computer networks, cable systems and connectors;
- To know the purpose and rules for usage of instruments for cabling of local computer network;
- To build a cable system and to put connectors; To test the cable system for defects;
- To know a current system, applied in network software;
- To know the structure and the succession in installing different operational systems and drivers, network hardware and network operational systems;



## Profession "Technician of Computer Systems"

- To know the kinds of network peripheral devices, purposes, principles of management;
- To work on the global computer network Internet;
- To use diagnostic programs for the installed hardware, system and applied software, network hardware and software;
- To install and use antivirus and archive programs;
- To install and use resources for protection of the information;
- To know different methods for searching and localizing with the purpose of elimination of problems and defects in the network environment;
- To know how to establish communication and attendance to the client as preparing a written report for the completed work;
- To know his/her rights and obligations as a participant in the labor process according to the Codex of Labor, to understand the contract between employer and employee;
- To develop a business plan and to prepare finance-accounting documents.



## Realisation

*Where is it possible for the students to get a job after they have successfully graduated the 12th grade in the profession of "Electronic Technician- Computer Systems" at Sofia Vocational High School of Electronics "John Atanasov"?*

- Those who have successfully graduated 12th and 13th grades can work as computer technicians at the following firms:
- Computer firms for assembling, diagnostics and repair of computer systems;
- Computer firms for projecting and installing of local networks;
- All firms with local networks- maintenance and administration of the network;
- Software firms for installing and maintenance of operational systems, for protection of the information by antivirus programs, for designing Web pages, working on the Internet.



- ❖ *Computer Networks. Administration and maintaining a network. Computer system administration.*
- ❖ *Working with the particular computer devices*
- ❖ *Installing of Operating System and applied software. Working with external memory*
- ❖ *Internet Programming*
- ❖ *Working with the applications on the Internet. Working with the Java language on the Internet*
- ❖ *Working with servlets – connection between HTML formats and Web servers*
- ❖ *Working with Java Server Pages /JSP/*
- ❖ *Working with the possibilities for access to data bases on the Internet*
- ❖ *Organization and technology of software production*
- ❖ *Usage of the current technologies of the software production, observance of the stages for construction of information systems. Application of the rules for creation of professional style in software development- life cycle, formulating, planning.*



# Programmer – *module education*

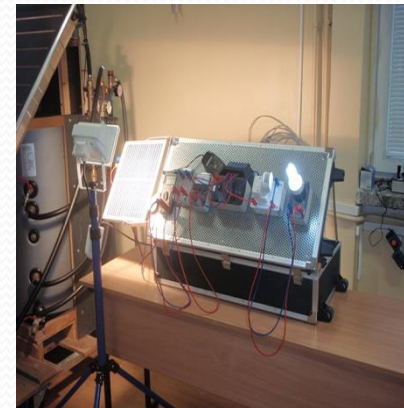
- ❖ *Solving of problems in Windows environment*
- ❖ *Working in Access environment*
- ❖ *Working in C++ environment*
- ❖ *Creation, reading and editing of assigned in C++ code in order to get programming code for solving of a brought –up problem or for changed exit results*
- ❖ *Working in Visual Basic environment*
- ❖ *Creation of structures in Visual Basic*
- ❖ *Creation of different kinds of procedures*
- ❖ *Working with the build-in functions*
- ❖ *Working with the constructions controlling transition and cycle*
- ❖ *Reading of Visual Basic code, correction of mistakes*
- ❖ *Actualizing of given Visual Basic code in order to get changed exit results*
- ❖ *Solving problems, connected with data base processing*
- ❖ *Creation of a complete information system for data bases*





## Renewable energy sources – *module education*

- ❖ Solar energy
- ❖ Photovoltaics
- ❖ Wind energy
- ❖ Biomass.



# Participation in exhibitions

## Inter Expo Center





**OUR SCHOOL IS A HONORARY EXHIBITOR AT THE  
INTERNATIONAL EXPO CENTER WITH OWN FREE  
PLACE ON ANNUAL FORUMS DEDICATED TO RES,  
ENERGY EFFICIENCY AND SAFETY ENVIRONMENT**





*The girls in our school  
are not many, but ....*

*they are beautiful!*





Two our students in Izmir, Turkey  
with their  
**ELECTRO-PV MARS ROVER.**  
TRT was interesting with them!  
The sponsor is



**You can do a test-drive!**  
**If it's sunny – it will be FREE!**  
**If it's not – I am sorry,**  
**you will pay 0.10 euro per kWh! ☺**





## Practical education in companies – partners:

- ❖ RTS – <http://www.rts-bg.com>
- ❖ VAN Computers – <http://van-computers.com>
- ❖ PERSY – <http://www.persy.com>
- ❖ SBS АД – <http://www.sbs.bg>
- ❖ Top systems and technologies – [http://www.bct- bg.com](http://www.bct-bg.com)
- ❖ COMPUTEL – LTD – <http://www.cs.tu-sofia.bg>
- ❖ SKY Company – <http://www.sky.bg>
- ❖ Kuazar Group LTD – <http://www.kuazar-bg.com> •  
KONTRAX – <http://www.kontrax.bg>
- ❖ JAR Computers – <http://www.JARcomputers.com>



## Companies - partners

- ❖ "ХИС" АД
- ❖ "БИЦ – ИЗОТ" АД
- ❖ “Festo Production” ЕООД
- ❖ "Телетек" ЕООД
- ❖ "АТМ Девелопмънт" ООД • "ЕЛЕКТРОНИНВЕСТ" ООД
- ❖ Интернешенъл Пауър Съплай (IPS) • "ДАТЕКС" ООД
- ❖ "ПРИМА – ТЕХ – ПРО" ООД
- ❖ "Къртис – Балкан" ЕООД



## Companies - partners

- ❖ Ruvex – <http://www.ruvex.bg>
- ❖ Bulgarian photovoltaic association – <http://www.bpva.bg>
- ❖ Bulgarian Solar Association – <http://www.bsa.bg>
- ❖ Electric Solar Systems – <http://www.elektrosolar.net>
- ❖ Central Laboratory in Solar Energy and New Energy Sources - <http://senes.bas.bg>
- ❖ Sunservice – <http://www.sunservice-bg.com>

# National and International competitions and awards





Students from 6 countries: Greece, Turkey, Romania, Serbia, Poland, Bulgaria.

**First place for Dimitar Rangelov and Stefan Ratchev / 10<sup>i</sup> class/ in the category FREESTYLE and third in LINE FOLLOWER**



# CONTEST „YOUNG INVENTORS“



Contest „YOUNG INVENTORS“, Foundation Minio Balkansky, October 8, 2015, Chamber of Commerce, in the presence of representatives of business, scientists, different media, prof. Minko Balkansky gave awards to the winners in the contest.

Official guest of the event was the Ambassador of France His Excellency Xavier Lapeyre de Cabanes.

# CONTEST „YOUNG INVENTORS“



**Dimitar Rangelov and Stefan Ratchev from 11 j,**  
supervised by Ms. Milena Gosheva, won the jury with three inventions  
that have application in real life:

- 1. Automatic adjustable system for school bell in 9 modes;**
- 2. Automated process in the canning industry.**
- 3. They received technical equipment to elaborate their next project concerning the safety traffic and prevention of car crashes.**

# The President of Bulgaria awarded the winners in the contest „My 3D world“



**The President of the Republic of Bulgaria**, under whose patronage the 70<sup>th</sup> annual jubilee of the Technical University in Sofia is held, took part in the ceremony of giving awards to the winners in the contest „My 3D world“ on June, 3, 2015 at 15:00 in the Hall of the Academic Counsel.

# 1 place Martin Marianov Mitov

- ▶ „Tank M41 Walker Bulldog“
- ▶ Award: a portable computer, the awarded object is elaborated on 3D printer and payment of two semester fees for the first two semesters.



## 2 place Ivan Ivanov Ivanov

- ▶ „Tank challenger-2“  
Award: a digital camera and payment of two semester fees for the first two semesters.
- ▶ The prize was awarded by the Rector of the Technical University - Sofia, prof. doctor of technical sciences eng. Georgi Mihov.

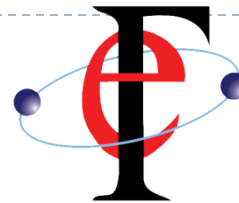




- ▶ Gun I96-a1“  
Award: a professional wireless mouse and payment of semester fees for the first semester.
- ▶ The prize was awarded by the President of the Counsel of trustees for the Technical University – Sofia, Ms. Sasha Bezuhanova.

# Prominent students

Aleksandar Ginovski 11<sup>b</sup>



**SAP GeekyCamp** Крайно класиране

място	Geeky Camper	училище	ОБЩО	гуру значки	A1	A2	A3	A4	A5	A6	A7	A8
1	Александър Гиновски	СПГЕ София	53.10		7.00	11.00	5.00	8.00	8.00	1.00	5.00	8.10
2	Валери Хараланов	СМГ	50.80		8.00	7.30	7.00	8.00	7.00	4.00	1.00	8.50
3	Антон Стоянов	СМГ	48.60		7.50	10.00	8.00	7.00	4.00	3.00	0.00	9.10
4	Александър Георгиев	ПМГ Хасково	39.90		7.00	5.00	3.00	5.00	0.00	5.00	10.00	4.90
5	Теодор Вълчев	ПГИИ Търговище	34.00		7.00	6.00	6.00	3.00	4.00	4.00	4.00	0.00
6	Виктор Костов	СМГ	31.00		7.00	7.00	4.00	6.00	0.00	2.00	0.00	5.00
7	Николай Найденов	1 СОУ Търговище	26.50		5.50	5.50	3.00	0.00	3.00	1.00	0.00	8.50
8	Андрей Гиздов	НПМГ	26.00		6.00	5.00	8.00	0.00	7.00	0.00	0.00	0.00
9	Елена Стаменова	НПМГ	25.10		6.50	5.60	0.00	7.00	0.00	0.00	0.00	6.00
10	Дейвид Димитров	ПМГ Монтана	24.75		7.00	5.80	3.00	0.00	0.00	1.00	0.00	7.95
11	Ангел Ангелов	2 СОУ Търговище	22.00		7.50	6.50	8.00	0.00	0.00	0.00	0.00	0.00
12	Борис Рашков	НПМГ	20.80		6.30	8.50	0.00	0.00	0.00	2.00	4.00	0.00
13	Марам Баядре	НПМГ	19.90		7.00	5.00	0.00	0.00	0.00	3.00	0.00	4.90
14	Григор Колев	МГ Варна	19.00		8.00	6.00	0.00	0.00	0.00	5.00	0.00	0.00
15	Стилиан Вакинов	ПМГ Казанлък	17.80		6.00	5.80	0.00	0.00	0.00	1.00	0.00	5.00
16	Калоян Тодоров	ПМГ Видин	17.60		7.00	6.00	3.00	0.00	0.00	1.00	0.00	0.60
17	Кристиан Христов	НПМГ	13.80		8.00	3.80	0.00	0.00	0.00	2.00	0.00	0.00
18	Димитър Ружев	СМГ	12.80		7.00	5.80	0.00	0.00	0.00	0.00	0.00	0.00
18	Катерина Петкова	МГ Варна	12.80		3.00	2.00	6.00	0.00	0.00	0.00	0.00	1.80
20	Николай Тануриков	ПГЕ Варна	10.20		4.00	6.20	0.00	0.00	0.00	0.00	0.00	0.00
21	Георги Раев	125 СОУ София	4.00		0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Димитър Даскалов	НПМГ	3.50		3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Java basics  
 OOP  
 Tools  
 Files, Serialization, Streams, JSON



# National Olympiad in Information Technologies



МИНИСТЕРСТВО НА ОБРАЗОВАНИЕТО И НАУКАТА  
РЕГИОНАЛЕН ИНСПЕКТОРАТ ПО ОБРАЗОВАНИЕТО –  
МОНТАНА  
ПМГ „СВ. КЛИМЕНТ ОХРИДСКИ” - МОНТАНА

## НОИТ ГРАМОТА

НА **МИРОСЛАВ ПЕТРОВ МАРИНОВ**

ОТ СПГЕ "ДЖОН АТАНАСОВ" , ГР. СОФИЯ

ЗА УЧАСТИЕ С РАЗРАБОТЕН ПРОЕКТ В НАПРАВЛЕНИЕ

**ИНТЕРНЕТ ПРИЛОЖЕНИЯ**

В ТРИНАДЕСЕТАТА НАЦИОНАЛНА ОЛИМПИАДА ПО

**ИНФОРМАЦИОННИ ТЕХНОЛОГИИ**

9-10 май 2015 г.  
ГР. МОНТАНА

ТРАЙКА ТРАЙКОВА

НАЧАЛНИК НА РИО - МОНТАНА



## National contest in applied Electronics „I can and I know how”, sponsored by the commercial chain Elliemex

Nikolay Vassilev Nehovsky – individual II place  
and a silver medal

Nikolay Vassilev Nehovsky and Pavel Hristov  
Denev – team IIIrd place, silver medals and a cup  
They are admitted as undergraduates in technical  
universities in Bulgaria.



# ....sport and young researchers



# Documentary of the Bulgarian National Television “My school”



*Sofia Vocational High School of Electronics “John Atanasov” is a beneficiary in the following programs:*

- **“SUCCESS”** is an acronym meaning a school that through self-affirmation and training leads to European horizons. The project is co-financed by the European Social Fund of the European Union. In the school year 2014-2015, 26 school clubs were formed with the participation of 269 students who, in their free time, discussed interesting topics or enlarged their professional training.



## PROJECT ACTIVITIES

### ***Sofia Vocational High School of Electronics “John Atanasov” is a beneficiary in the following programs:***

❖ ***School Practices*** – the project aims at improving the quality of vocational education and training, facilitating the access on a national level to the practical training of students through more and better opportunities for practice in a real working environment. Last year, 414 students of VHSE were certified in this program, having worked for 240 hours in different companies or universities in the capital city.



❖ ***Management for efficient professional education*** – is a project whose main objective is to develop a system of indicators, measuring the efficiency of the process of the vocational education as well as to develop a model of a unified management system of vocational education. The next step is devising mechanisms for operation of the system.





## PROJECT ACTIVITIES

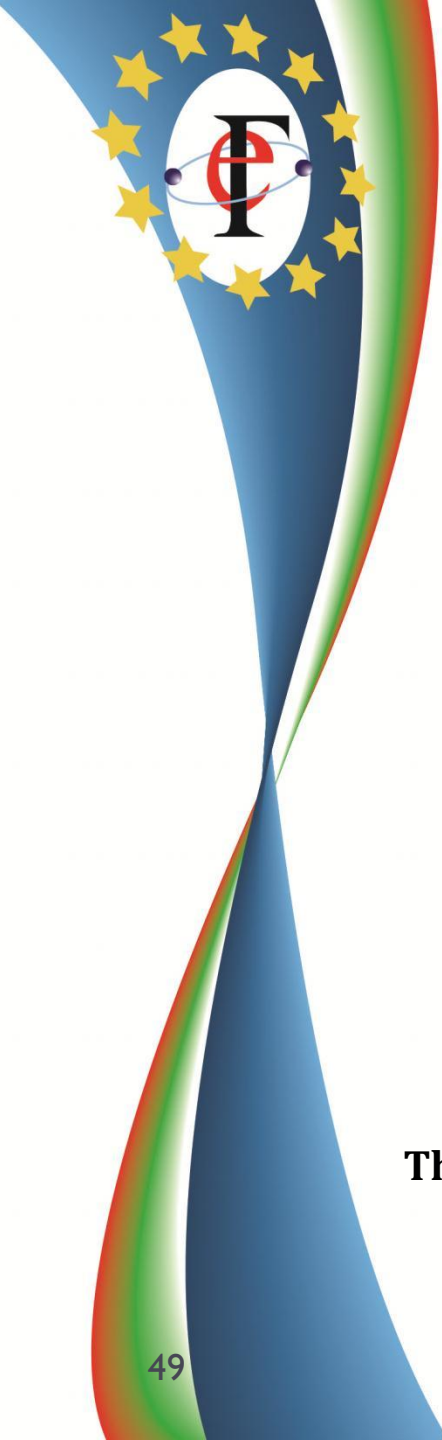
***Sofia Vocational High School of Electronics “John Atanasov” is a beneficiary in the following programs:***

- **“Development of the vocational education and training in VHSE in cooperation with employers”** is a project in which we have as a partner “Microsoft Bulgaria”. Microsoft IT Academy provides the latest software products of Microsoft, opportunities to work in laboratories, access to a huge number of courses and online resources of Microsoft. The students get Microsoft certificates, which guarantees knowledge and skills, associated with the most modern information technologies.



10 teachers with Microsoft certificates

Windows Server, SQL Server, Microsoft Expression  
Studio Ultimate, .NET Framework



Microsoft



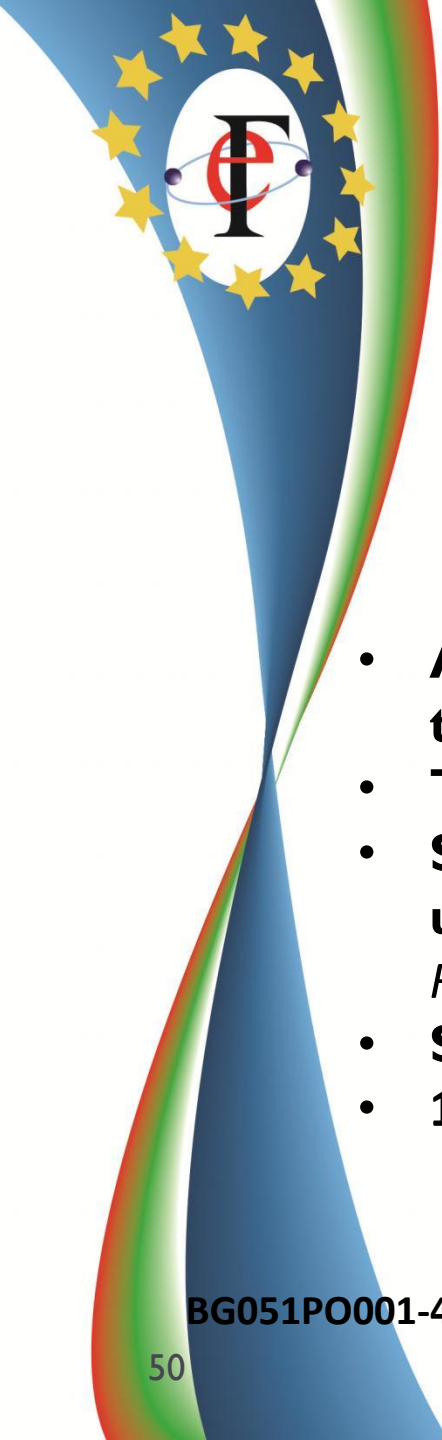
Европейски социален фонд



Европейски съюз

**Microsoft IT Academy  
is bought by VHSE “John Atanasov”  
in 2014 in connection with the project  
BG051PO001-4.3.05-0035  
„Development of vocational training and  
education in VHSE in cooperation with  
employers“/ 16 months/**

**The project is carried out with the financial support of Operational program  
„Development of human resources”,  
co-financed by the European social fond of the European Union**



# Microsoft



Европейски социален фонд



Европейски съюз

## RESULTS OF THE PROJECT:

- **An educational park and a test center for Microsoft training are built;**
- **Ten teachers are trained in Microsoft training**
- **School curricula for freely chosen preparation in IT are updated** - *Windows SQL Server, Windows Server, Microsoft .NET Framework, Microsoft Expression Studio Ultimata.*
- **Seven teachers trainers in Microsoft products;**
- **129 students trained**



2014-2015  
Program Member

Microsoft IT Academy



# Microsoft IT Academy

Microsoft IT Academy



A whole new kind of learning.  
It goes where you go.

[Sign in](#)

# Microsoft IT Academy

Microsoft IT Academy

Anka Ushanova ▾



## Organization dashboard

Learning Plans

18



Users

394



Groups

15



Reports



## Help topics

Getting Started Video

Additional Administration features video

Login and Enrollment Code Redemption for Learners video

Previewing and evaluating courses

Managing training for users and groups

Adding multiple users

Accessing reports

See all



# Learning plans (2)

Anka Ushanova

Add learning plan

Search for learning plans

Sort by: Date

Learning Plan	Microsoft Access 2010	Last Modified: 19 February 2015 By: Cvetana Puneva	<div><div></div><div></div><div></div><div></div><div></div></div> <div>Create enrollment link</div>
Learning Plan	WEB	Last Modified: 18 February 2015 By: Anka Ushanova	<div><div></div><div></div><div></div><div></div><div></div></div> <div>Create enrollment link</div>
Learning Plan	Office365	Last Modified: 17 February 2015 By: Marieta Harizanova	<div><div></div><div></div><div></div><div></div><div></div></div> <div>Create enrollment link</div>
Learning Plan	Advanced Windows Store App Dev...	Last Modified: 17 February 2015 By: Marieta Harizanova	<div><div></div><div></div><div></div><div></div><div></div></div> <div>Create enrollment link</div>

# Manage learning plan

Microsoft IT Academy

VHSE John Atana... | Anka Ushanova





## Manage learning plan

To remove a course, look under Courses in learning plan and click Remove.  
To add courses, click Add courses.

0	0	50
Added	Removed	Total
		(50 max.)

Courses in learning plan [Add courses](#)



	Course 70091: C# and the .NET Framework	<a href="#">Remove</a>
	Course 70097: Collections, Generic Types, and Custom Collection Classes	<a href="#">Remove</a>
	Course 2555: Developing Microsoft® .NET Applications for Windows® (Visual C# .NET)	<a href="#">Remove</a>
	Course 3355: Implementing Collections and Generics in the Microsoft .NET Framework 2.0	<a href="#">Remove</a>

\* Learning plan name

MS .NetFramework

Save

Cancel

# Learning plans

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Main directions of school curricula :

- MS Office 365;
- Database;
- Microsoft.NET Framework;
- Microsoft SQL Server
- WEB Development
- C# Development

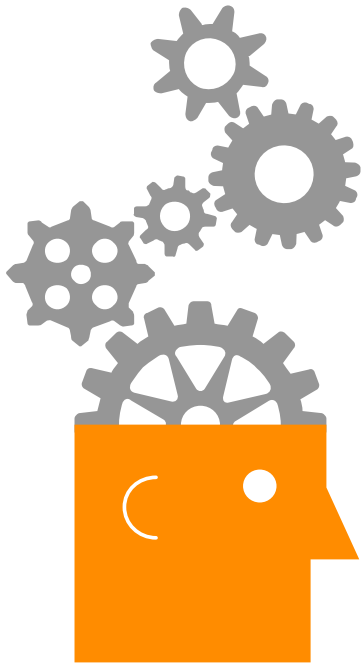
# Certification of Completion

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Extra class groups	2014-2015
Microsoft SQL Server	16
Microsoft.NET Framework	20
Microsoft Expression Studio Ultimate	43

# Students On Line Activity

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**Approximately  
40%-100%**





# The main goals of the project

1. To train installers for small scale RES systems
2. Implementation of the training materials and practical experience to the curricula of RES speciality



# PARTNERS

- BZS, Munich, Germany
- ALP, Dillingen, Germany
- WIP, Germany
- CRES, Athens, Greece
- ASSISTAL, Milan, Italy
- Krakow Polytechnic university, Poland
- Training center, Velenie, Slovenia
- VHSE, Sofia, Bulgaria



The project ended with very high results of the course-members.  
All of them received a **certificate for professional training on a part  
of the profession**

**“Installation of Photovoltaics”,**

**“Installation of Solar Thermal systems”,**

**“Installation of Heat pumps”,**

**“Installation of Facilities producing energy from Biomass”**  
of the profession “Technician of energy facilities and installations”,  
specialty Renewable Energy Sources.

**Euronews made a short film about our school,  
which you can see in laboratory 6.1!**

## Number of certified installers

**Summary:**

**Trained: 77 course-members**

**Total: 163 certificates in professional training**



# Some interesting moments



One is working, five are watching at him 😊



A roof in the basement?  
Is it nonsense or not? 😊



**Everybody hopes to take a sun bath, but it will be cool to clean the hands 😊**



# To be continued by

IEE/13/BWI 686 BUILD UP Skills EnerPro (BUS Bulgaria II) “Energy Training for Professionals in the Building Sector in Bulgaria”. The main goal of the project is to create a National centre of knowledge regarding the energy efficiency and the renewable energy sources used in buildings and to develop a set of technological competence for the trainees in the specialty “Renewable Energy Sources”.



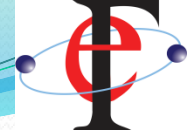
## PROJECT ACTIVITIES



*Sofia Vocational High School of Electronics “John Atanasov” is a beneficiary in the following programs:*

- **Build Up Skills** - “Energy Training for Professionals in the Building Sector in Bulgaria”. The main goal of the project is to create a National centre of knowledge regarding the energy efficiency and the renewable energy sources used in buildings and to develop a set of technological competence for the trainees in the specialty “Renewable Energy Sources”.





# SOME OF THE PARTNERS



Sofia Vocational High School of electronics "John Atanasov"



КАМАРА НА СТРОИТЕЛИТЕ В БЪЛГАРИЯ  
BULGARIAN CONSTRUCTION CHAMBER

**CDETБ**

An Bord Oideachais agus Oiliúna Chathair Bhaile Átha Cliath  
City of Dublin Education and Training Board



НАЦИОНАЛНА АГЕНЦИЯ ЗА ПРОФЕСИОНАЛНО  
ОБРАЗОВАНИЕ И ОБУЧЕНИЕ





# PASSIVE HOUSES FOR ACTIVE PEOPLE

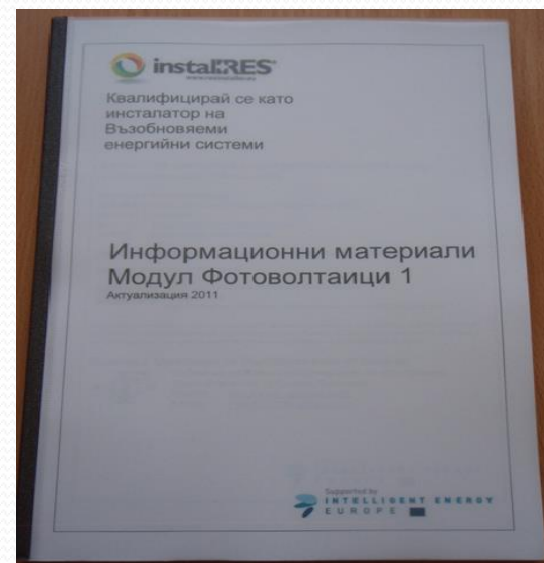
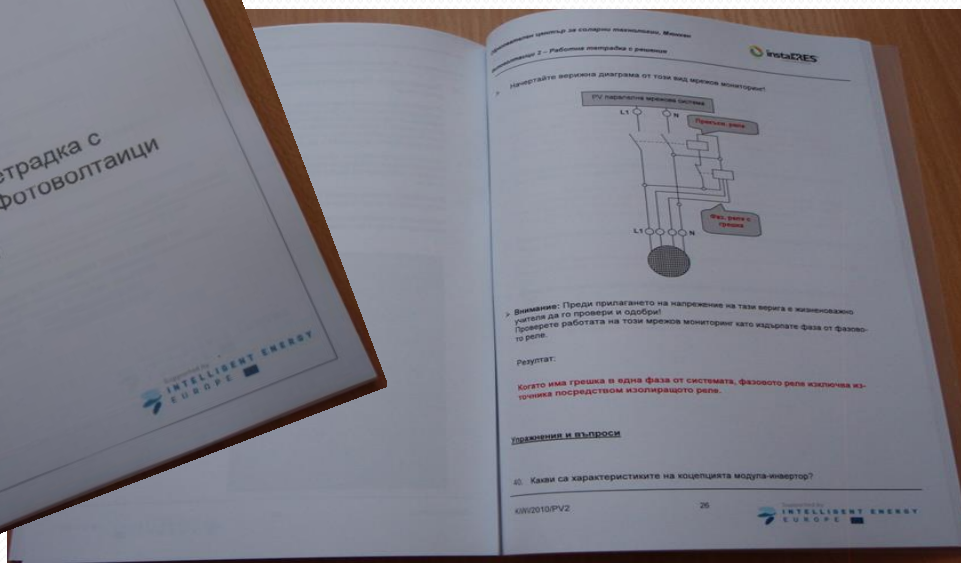
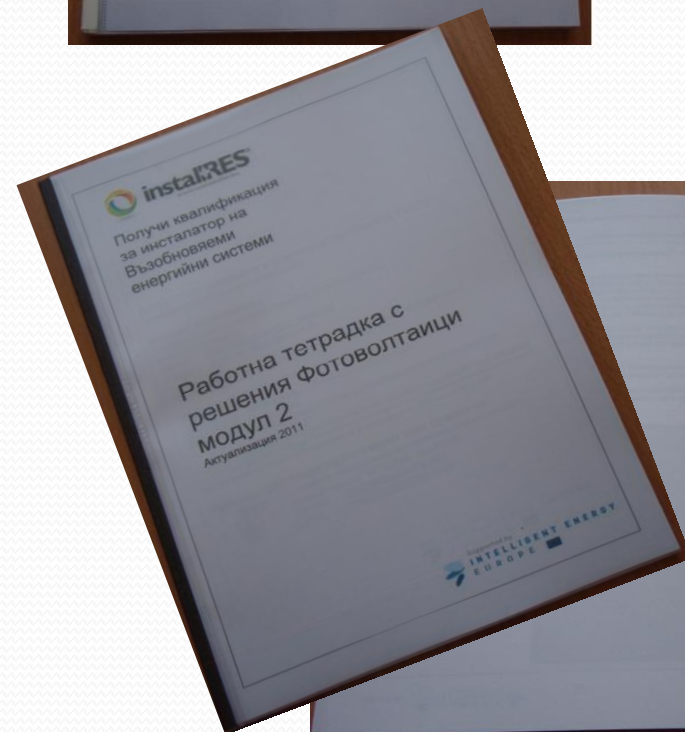
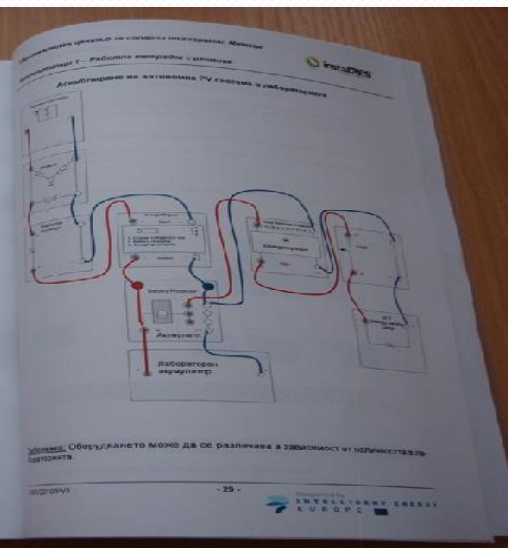
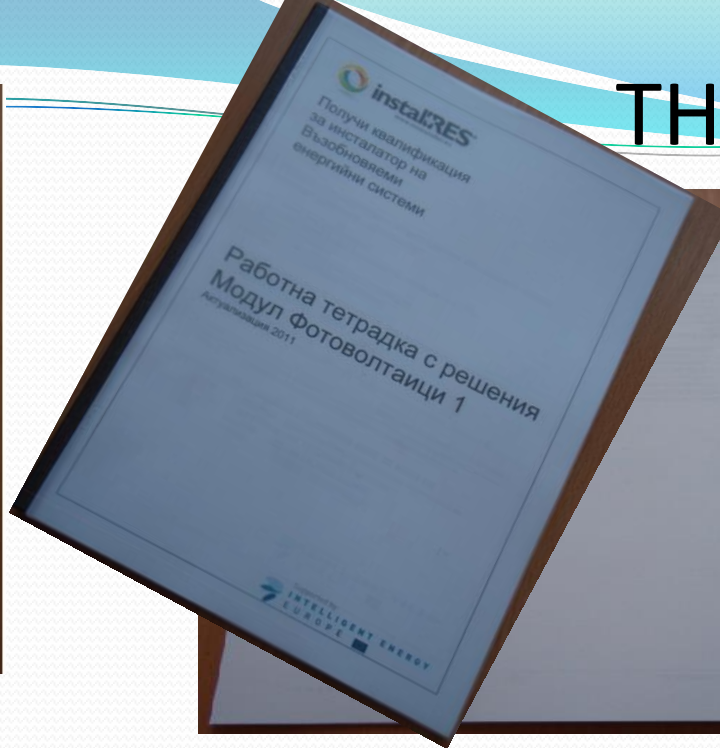
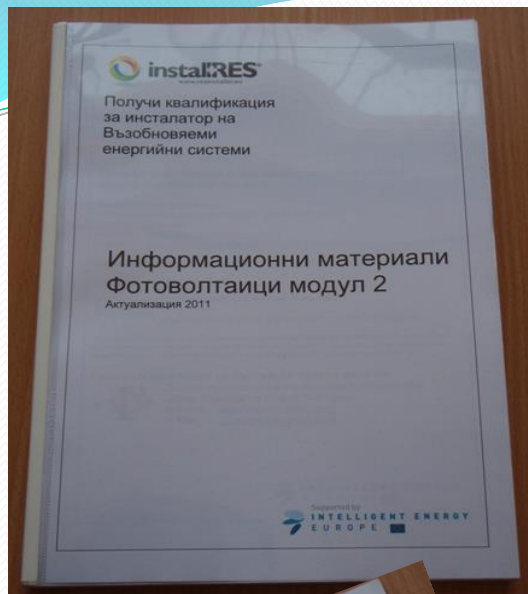
# Solar roof installations in our school



These are two REAL installations provided by the European project BG161PO001/1.1-02/2008 “Support for ensuring a suitable and efficient state educational infrastructure contributing to the development of sustainable city areas” supported by Operation program “Regional development”



# THE TEXTBOOKS





## Project ACTIVITIES

- The cooperation of VHSE “John Atanasov” with “**Hewlett-Packard Bulgaria**” is another project whose main objectives are training students and teachers by experts in hardware and software area, as well as by specialists in business management in the IT industry.



**Hewlett Packard  
Enterprise**



- We also work in the framework of the National Program “Information Computer Technologies in Education”, supported by the Ministry of Education and Science. As a result, a Virtual Private Server is built as well as a Technology Park with a full range of technologies from the fields of computer networks. There is infrastructure for online training and testing.

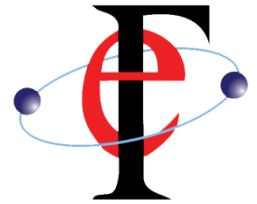


МИНИСТЕРСТВО  
НА ОБРАЗОВАНИЕТО,  
МЛАДЕЖТА И НАУКАТА

# Collaboration



## Hewlett Packard Enterprise



On 16.04.2015 Mr. Iravan Hira, general manager of “Hewlett Packard” Bulgaria and Ms. Iglika Nedelcheva, principal of VHSE “John Atanasov” signed a Memorandum for collaboration.

# Collaboration



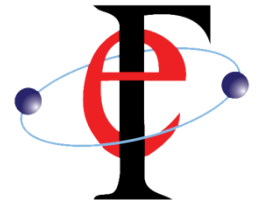
## Hewlett Packard Enterprise

VHSE “John Atanasov” is the first high school in Bulgaria partner of Hewlett Packard Enterprise in the field of vocational education.



# Forms of collaboration

## Hewlett Packard Enterprise



A representative group of students made a school visit to the global laboratory of HP for Central and Eastern Europe.

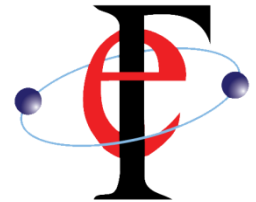
# Forms of collaboration



## Hewlett Packard Enterprise

School presentations were held in the school guided by experts from the field of hardware and software on the topics:

- **Cloud technologies and their future development** /eng. Georgi Alipiev, chief of the HP lab/;
- **Quantum computers** /eng. Rady Radev/
- **Big Data** /eng. Nikolay Chebotarev, Training Coordinator/



# Forms of collaboration

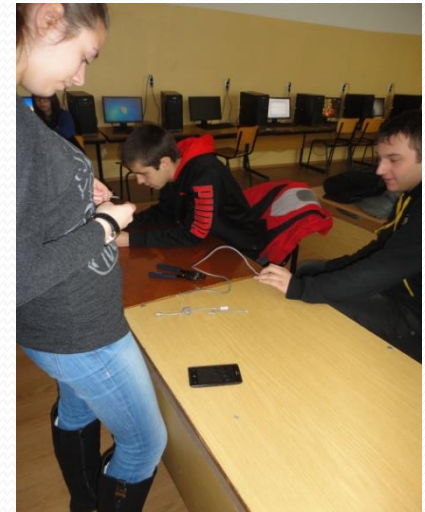
## Hewlett Packard Enterprise



Plamen Ivanov, PhD, who was awarded by the President of the Republic the prize “John Atanasov” for scientific achievements and for projects with high public importance in 2014, distributed the diplomas of the excellent students graduated in 2015.

# CISCO ACADEMY

- The “Cisco Network Academy” in our school was created in 2012 as a daughter Academy at Sofia University. It offers courses following the curricula of Cisco Systems: ***CCNA Routing and Switching***.



# CISCO NETWORK ACADEMY



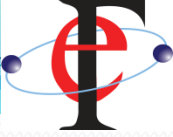
at Sofia Vocational High School of Electronics, a member of the Bulgarian Association of the Networks Academies

The learning process of Cisco Network Academy at VHSE “John Atanasov” takes place in an well equipped for this aim Cisco laboratory in the school, provided with 3 switches of Catalyst 2960, 3 routers Cisco 2911, as well as with everything needed for their connection to different networks.



# Cisco Network Academy

- The training process is assured by 4 certified teachers.
- By September 2015 150 students have been certified in the Academy.



# Cisco Network Academy

The subject is taught in Bulgarian. **The teaching material and the exam tests of CISCO are in English.**

At the end of the course the students know and are able

- To install and make configurations of CISCO switches and routers using LAN and WAN interfaces;
- To assure technical maintenance;
- To support networks and to ensure their safety;
- To perform basic tasks in planning, design, installation, the work and support of Ethernet and TCP/IP networks



# Cisco Network Academy

- The educational content is kept in online based resources such as lectures, interactive exercises, simulators, as well as a system of evaluation of the acquired knowledge and skills. All this is available for each student at any time by clicking on the button “Study materials” of the main menu. Access is via a personal account created for the trainee while enrolling at the academy.



# Cisco Network Academy

- Since the school year 2012/2013 the students in the 11<sup>th</sup> and the 12<sup>th</sup> grade have studied the subject “Computer Networks and Communications” in a regular or extra-class form according to the professional program of Cisco – CCNA (Cisco Certified Network Associate) Exploration. The school curriculum contains interactive activities completing the theoretical content. The expanded laboratory activities in the extracurricular preparation help creating critical thinking and solving problems, they also encourage the development of skills for research.
- Every year young girls from VHSE “John Atanasov” take part in the organized by CISCO Bulgaria Day of young girls and Information technologies. On this day they visit the offices of CISCO where through Telepresence connection they take part in a videoconference with their peers from all over the world.



# SAP Labs Bulgaria- partner





# SAP Labs Bulgaria- partner

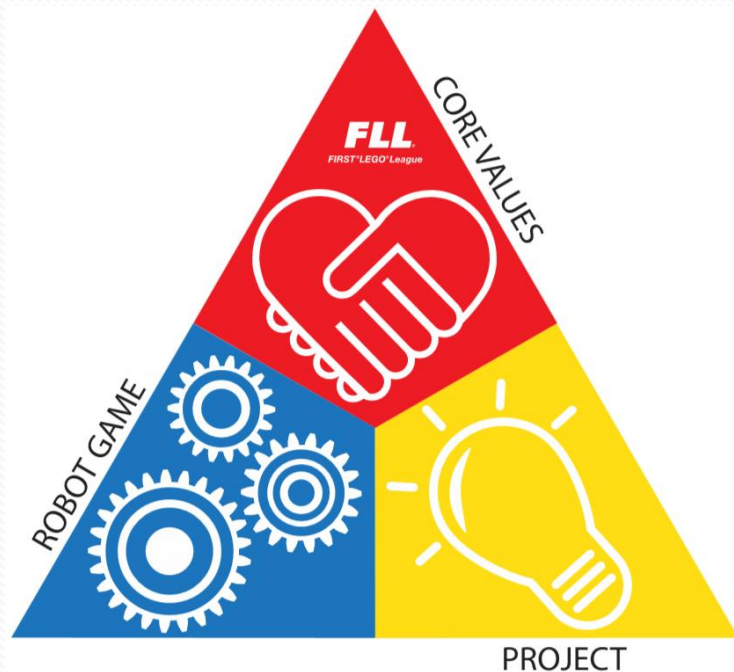
- SAP is the world leader in enterprise applications in terms of software and software-related service revenue. Based on market capitalization, SAP is the world's third largest independent software manufacturer.
- As the market leader in enterprise application software, SAP is at the center of today's business and technology revolution.
- SAP company encourages its employees to volunteer as mentors in educational programmes. We cooperate on two open projects and negotiate on future ones.



# FLL - FIRST LEGO League



# FLL - FIRST LEGO League



Our goal is to help team members see the fun in:

- science
- technology
- engineering
- mathematics

Whether or not a team receives an award at a competition, team members win just by participating.



# FLL - ROBOT GAME



- Teams design, build, program, and test autonomous robots using LEGO® MINDSTORMS® technology.
- The robots are designed and programmed by team members to perform a series of missions during 2½ minute matches.
- The Robot Game playing field reflects the real-world theme for this season.



# FLL - PROJECT



- Identify: Teams research a real-world problem in the field of this season's Challenge theme.
- Solve: Teams create an innovative solution to that problem (either by creating something that doesn't exist or building upon something that does).
- Share: Teams share their findings with others.

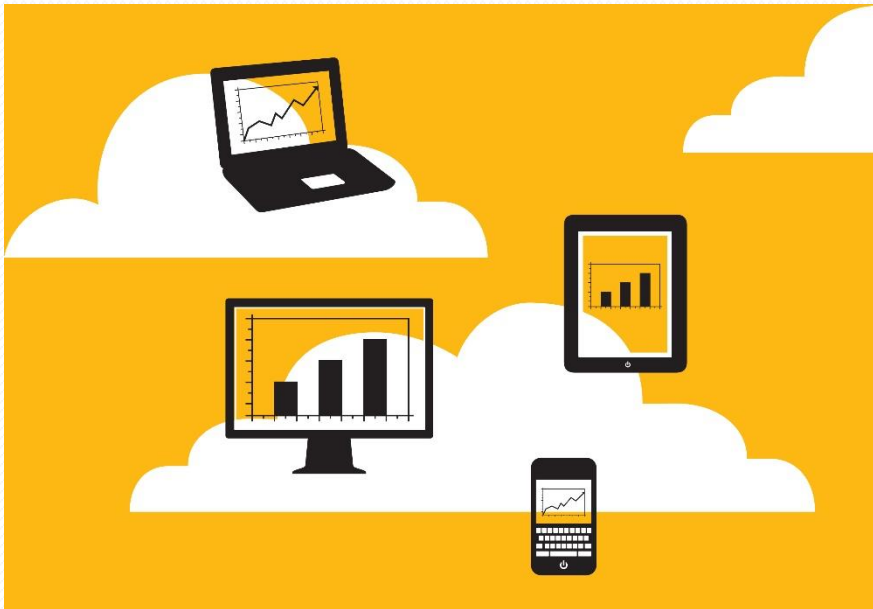


# FLL - CORE VALUES



- We are a team.
- We do the work to find solutions with guidance from our Coaches and Mentors.
- We know our Coaches and Mentors don't have all the answers; we learn together.
- We honor the spirit of friendly competition.
- What we discover is more important than what we win.
- We share our experiences with others.
- We display Gracious Professionalism® and Coopertition® in everything we do.
- We have FUN!

# SAP HANA Cloud Platform



Our goal is to let students gain knowledge on contemporary software technologies:

- Web application
- Mobile application
- Cloud application

Students create their own:

- Front-end web content with HTML5, CSS3 and JavaScript
- Back-end service with Java in SAP HANA Cloud Platform.
- Mobile version with responsive design and User Experience



# SAP HANA Cloud Platform



Students easily practice and learn about:

- IAAS  
Infrastructure As A Service
- PAAS  
Platform As A Service
- SAAS  
Software As A Service

Dirigible is an Integrated Development Environment as a Service (IDEaaS) for dynamic applications. It provides both development tools and runtime environment.



# SAP Labs Bulgaria- partner





# SAP Labs Bulgaria- partner

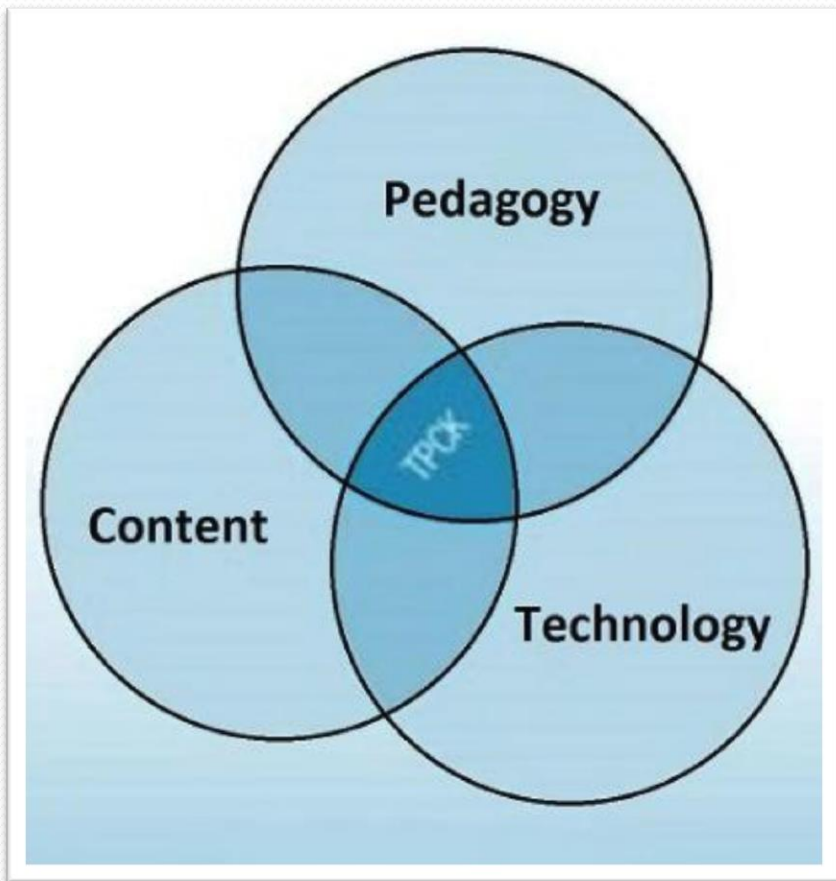


# e-learning



In Bulgaria as all over the world education investigates ways to integrate Information and communication technologies.

# e-learning: TPCK model

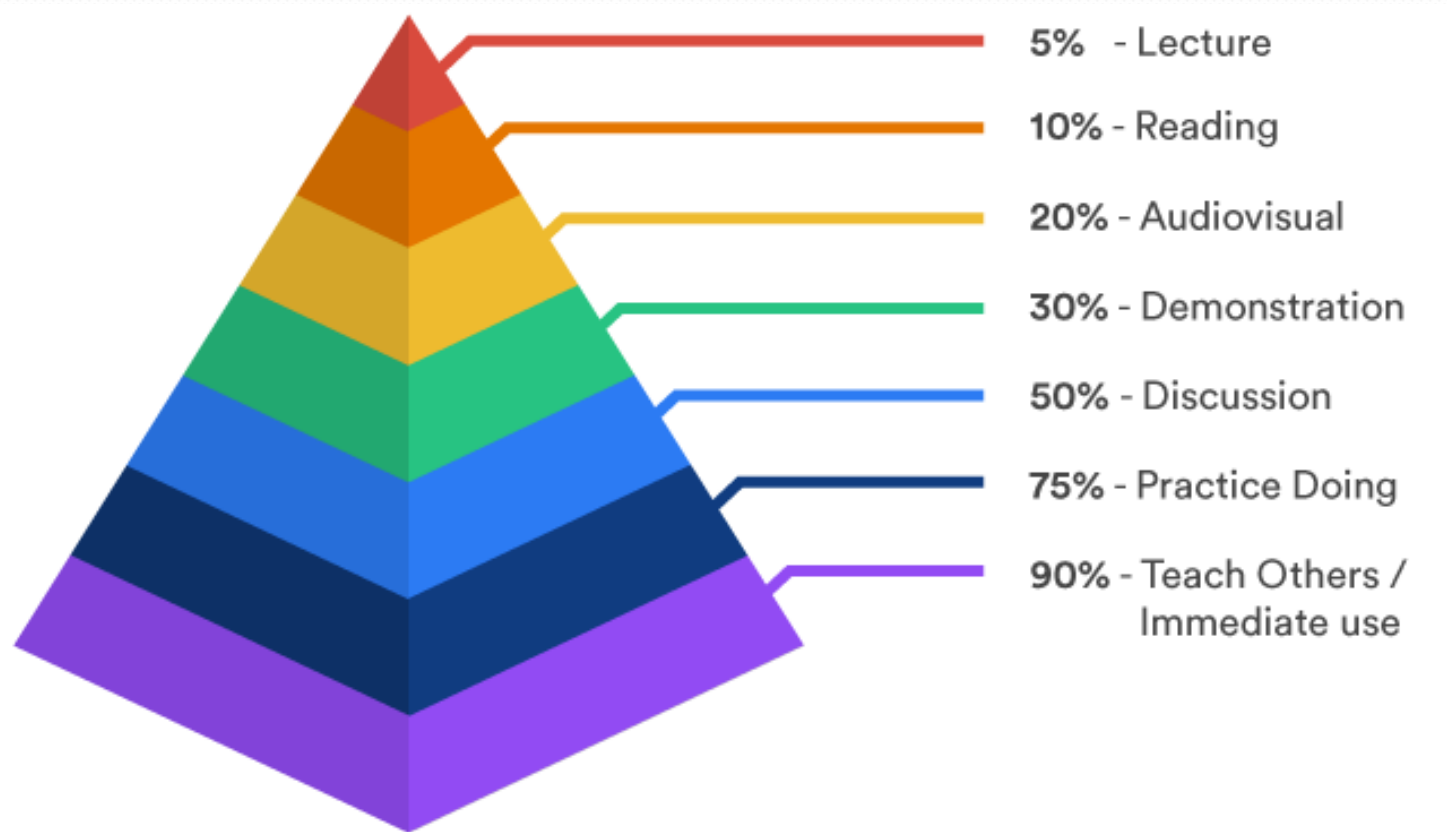


Teachers should have strong knowledge and experience in these three main fields of their job:

- Technology
- Pedagogy
- Content



# e-learning: learning pyramid



- Active forms visé passive forms of teaching
- Our goal is practice doing with interactive lessons



# e-learning: pros and cons



- Virtual model of abstraction
  - Learn by doing
- Repeated actions
  - Drill and Practice
- Calculation and data processing
  - Automation of education
- Availability
  - Anytime and anywhere



~~And insert them at the beginning of the list~~

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0 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

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25 Score 15

e-learning: demonstration



# International projects

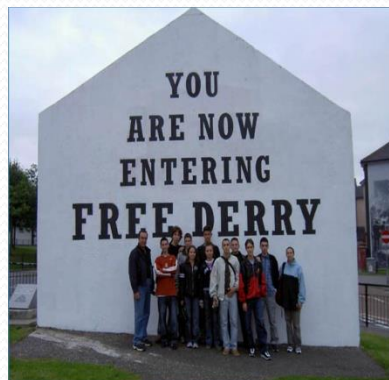
*We have experience in initiating Leonardo da Vinci projects from the European Commission Lifelong Learning Programme / KA1/, Intelligent Energy - Europe and another programs with a total of more than 270 students' and teachers' mobilities and trainings in Germany, Great Britain, Sweden, Austria, Check Republic, France, Ireland, Italy, Slovenia, Greece, Poland.*

*The partner's target group consists of high school teachers and high school students from 15 to 18 years old.*



Munich,  
Germany

Derry, Ireland



Stockholm, Sweden



# 2016

Mobility is also the agenda in our plan of developing the institution and broadening the horizon and possibilities to our students with professional and other educational mobility / KA1/. We are planning a Project Proposal for students' mobility with the cooperation of WBS Training AG, Germany, for professional training in a real working environment /KA1/.





# OPEN FOR PARTNERSHIP

***We will be glad to have you as a partner organization for Strategic partnership in Erasmus+ /KA 2/, being engaged in youth work and non-formal learning for young people.***

## **Contact persons:**

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[director\\_spge@abv.bg](mailto:director_spge@abv.bg)

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Erasmus + KA2 English language teacher

## **Responsible teachers – professional training:**

***eng. Dzana Ivanova*** – [d2200@abv.bg](mailto:d2200@abv.bg) – contacts with Germany and Scandinavian countries .  
Erasmus+KA1 . Computer technologies.

***eng. Kiril Konov*** +359 887 533 583 e-mail: [k\\_konov@yahoo.com](mailto:k_konov@yahoo.com) - Renewable energy sources.





# THANK YOU FOR YOUR ATTENTION!

The presentation is made by: eng. Dzana Ivanova – MA  
*senior teacher in professional training, responsible teacher  
for the speciality "Computer technics and technology"  
thanks to the information provided by my colleagues*

