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Dear Sirs/Madams.

IT training anywhere.

The ECCC Foundation is an international coordinating organization of the European Computer Competences Certificate system. Our main objective is to supervise actions that are connected with the ECCC standard of certification. Our core activities focus around promoting lifelong learning, education, and supporting initiatives aimed at developing core competencies.



ECCC Foundation became an active actor of the European market in 2009. We focus

on implementing and developing a system of training and certification in the European standard of the Certificate of IT Competences. In addition, we provide consultancy and promote a concept of information society through a series of dissemination events, such as conferences, presentations and seminars.

It is my pleasure to present this handbook, which is a compendium of knowledge about the European Computer Competences Certificate.

President of the ECCC Foundation

I wish to inform you that on November 8, 2010, the ECCC Foundation has entrusted the European Institute of IT Education (now HUMANEO Association) to act as the Central Training Centre of ECCC.

As a Central Training Centre it organizes and conducts trainings, examinations, and workshops for candidates wishing to be ECCC examiners and trainers. We authorize examiners and trainers, as well as provide ECCC certificates. We work with over 200 trainers and 400 examiners throughout the country. We have a mobile computer lab, thanks to which we are able to pursue



The priority of our activities is the development of IT education and social initiatives aimed at making educational opportunities equal for all children and adolescents. We monitor the activities of Examination Centres, and promote the ECCC standard.

I invite you to take advantage of the services offered by the Central Training Center.

President/
of the HUMANEO Association

## ■ The idea and the goals of the ECCC standard

The European Computer Competence Certificate sets a standard of IT users on different levels: basic, medium, advanced and expert.

The ECCC standard is divided into the following areas:

- Information Technology area (IT)
- Computer Science area (CS)
- Applied Informatics area (AI)
- Professional Informatics are a (PI)



The variety of areas and levels make it possible to be extremely flexible when matching abilities and level of competency and abilities to the requirements of an individual work post. The selection and matching of the areas and levels to the individual work posts is supported by the ECCC Competences Matrix, which defines the number of hours and the level of the training. It can be a base for training institutions to create the programs of teaching and computer trainings.

Each level and module of the ECCC Certificate is verified with an exam which varies in duration and contents according to the level being tested.

After the exam, an ECCC Certificate confirming that the examinee has fulfilled all the ECCC requirements for this level is given. The ECCC exam can be taken by each person who chooses any module and a level of competency.



## **ECCC Advantages**

#### ■■■ Flexibility

The system of the ECCC certification does not impose an order of passing an individual modules and levels. It could be a way of matching competences to the work post. To support the process of choosing, the ECCC Foundation created a matrix of competences which should be treated as advice when choosing a module and level. The flexibility of the ECCC certification allows for a very precise planning of trainings and ability to fit them to the levels and beneficiaries' needs.

#### ■■ Standardization

The structure of the ECCC exams meets the required competences defined in the ECCC syllabus. The syllabi are the elements of standard and are published. They mark out the range of exams and they could be helpful as a base for creating training programmes.

## ■ ■ M ark accuracy to competence level

The result of the exam is announced as percentage value which helps define a level of competence. The special structure of the exam (including: full cover of tasks in syllabus by questions) means that the level is correctly and appropriately tested.

#### ■ ■ Objectivity

A and B level ECCC exams are carried out with support of the ECCC Examination System, which creates random exams and checks the answers. The ECCC examiner ensures that the procedures are correctly followed. C and D level ECCC exams are carried out as projects – the examinee implements complex cases. The results of this kind of tests are marked by the ECCC Examiner. The higher the level taken, the longer it takes.

#### ■■ Immediate gratuity

For levels A and B, the ECCC examination system instantly verifies exams, gives back results and prints ECCC certificates. There is no delay in receiving the certificate and the examinee does not pay anything extra for it.

#### ■ ■ ■ Expansion

Along with the development of computer science and communication technology and its appliance, new modules of ECCC certification competences have been created. It allows certification to fit to a changing world.

#### ■ ■ Innovation

Thanks to features like flexibility, precision, expansion, platform independence and the possibility of matching the level and range of certification to trainee needs, the ECCC certification system is innovative on a European scale. It complies with the most important features of a proper certification system: objectivity, standardization and high quality.



## Certification

ICT competencies can be verified on the following levels:

- A. Basic
- B. Medium
- C. Advanced
- D. Expert



#### A. Basic Level

This level sets the minimal requirements for the ICT user within a particular module. A holder of this level of certificate knows basic theoretical concepts within a particular module (e.g. Document Processing) and can use general tools on a basic functional level. At this level approximately 15% of technological possibilities that exist in this area are tested.

#### B. Medium Level

This level verifies competencies defined in the ECCC Basic level together with a more extended usage of tools and ICT within a particular module. At this level approximately 30% of technological possibilities existing in this area are tested.

#### C. Advanced Level

This level proves one's intermediate competencies with fluent usage of advanced ICT tools within a particular, tested area. At this level approximately 60% of technological possibilities existing in this area are tested.



#### D. Expert Level

This level proves proficiency, significant knowledge and practical skills in the particular area. Approximately 90% of knowledge in the area is tested during examination.

#### **■■■** Examination procedure

In accordance with the methodology of the ECCC standard, A and B level exams have a test form, whereas C and D level and professional ranges take the form of a case study. The examination process is supervised by an ECCC certified examiner who has completed training in ECCC procedures, has passed an examiners' exam, and has obtained the licence necessary to conduct the exams.

The test exam is conducted with help of the examination platform available on-line and lasts 30 minutes for A level and 45 minutes for B level.

C level exams last 60 minutes and are composed of 20 tasks, and in D level the examinee solves the case studies in 90 minutes

In the Professional Informatics area the exams last 90 minutes and can take the form of a test, a case study or a mixture of both.

## The ECCC Centres

#### ■ ■ The Central Training Centre

From 8.11.2010 the ECCC Foundation entrusted the European Association Institute of Computer Science Development, at present Humaneo Association, with the role of the ECCC Central Training Centre.



The ECCC Central Training Centre organizes and conducts trainings, exams and workshops for ECCC trainer and examiner candidates, as well as gives trainers and examiners licences and ECCC certificates.

The goal of the ECCC Central Training Centre is to:

- Promote the ECCC standard
- Take action in favour of improving computer education
- Provide ECCC examiners and trainers
- Implement and develop the system of training and certification in accordance with the ECCC standard
- Supervise the activity of the ECCC Exam Centres
- Take up social initiatives whose goal is to make educational possibilities equal for all children and teenagers
- Cooperate and exchange experiences with similar organizations
- Create didactic materials for the individual modules
- Accredit didactic materials created by other subjects
- Create ECCC promotion materials

#### **■■ ■ Examination Centre**

The ECCC Examination Centre is responsible for conducting ECCC exams. Examination Centre status can be granted to Labour Market Institutions, Lifelong Learning Institutions, Schools, Enterprises, and other organizational units which fulfill procedure conditions and obtain an accreditation.

The formal condition to gain ECCC Examination Centre status is obtaining the licence which gives the authority to conduct ECCC exams, given by the ECCC Foundation, confirmed with the certificate of the ECCC Examination Centre and signing at least one agreement with an ECCC Examiner.

The advantages of becoming an ECCC Examination Centre include: increasing the prestige of the institution through the international certification standard and the possibility of gaining an additional source of activity financing.

The tasks of an ECCC Examination Centre include:

- Organizing and conducting ECCC exams
- Providing access to the ECCC Exam Platform
- Printing the certificates and transferring them to examinees
- Exam financial service

#### ■■ Training Centre

An ECCC Training Centre conducts a process of learning in accordance with the ECCC Standard. Training Centre status can be granted to Training Institutions, Regional Institutions of the Labour Market, Schools, Enterprises, Institutions, Companies and other organizational units which fulfill procedure conditions and obtain an accreditation.

To obtain Training Centre status it is necessary to provide a learning process based on the materials in accordance with the ECCC Standard and provide trainers licensed in the area of teaching. The Training Centre can use materials published by the Central Training Centre or introduce its own materials for accreditation. When formal requirements are fulfilled, the Training Centre obtains the certificate.

In the ECCC standard a Training Centre conducts promotion and marketing activities, outsources candidates for ECCC Trainers and is responsible for a proper educational process.

Obtaining Training Centre status gives the possibility to broaden the education on offer at the centre, particularly in the context of projects co-financed by the European Union.





## Areas and modules of certification

## ■■■ IT M1 Computer Hardware and Software



Who doesn't use a computer? Perhaps the inhabitants of the Amazonian Jungle who haven't been found yet by the Eye of Google. In every other case there is huge probability that we use them every day. Even unconsciously...

Computers take care of our safety in a car, optimize the usage of water in a washing machine or try to create a 3rd dimension in television.

We can dislike them, but we can't ignore them. So it is worth getting to know them and use them consciously.

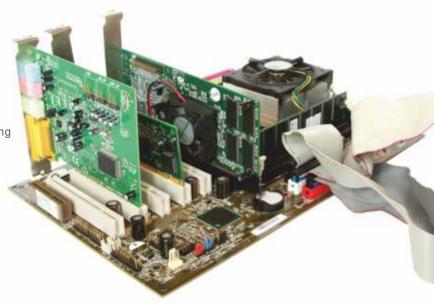
## A holder of the IT M 1 Computer Hardware and Software certificate IS ABLE TO:

- ✓ Define personal needs in the area of using computers and can choose adequate hardware
- ✓ Talk about computers with experts
- ✓ Use computers efficiently or fluently (advanced level)

#### The most important aspects of the IT M 1 Computer Hardware and Software module:

- The computer and its construction
  - the computer as a component of an information system
  - the basic components of the modern computer and common units of measurement.
  - fundamentals of data recording. Overview of storage devices, recording and reading your data
- Peripherals
  - the concept of a peripheral device. Clarifying the relationship between computer and input/ output device
  - basic computer peripherals. Review of the popular devices used in personal computers
  - the distinction between input and output devices. Understanding and identifying the equipment and matching hardware requirements
- Computer networks
  - the concept of computer networks
  - computer network topologies
  - concepts: Network Address (IP) address of the hardware (MAC) and the use of addressing in practice

- Operating System
  - the operating system as an interface between machine and a man
  - breakdown of operating system
  - hardware resources and management by the operating system
- Software
  - software as an intangible, abstract and unique product
  - the basic division of the software due to licences (freeware, shareware, trial etc.)
  - the basic division of the software due to application (office, usable, utility, etc.)



## ■■■ IT M2 Editing Documents



Usually the first and the most basic software installed on the computer is a text editor which helps to create documents.

Exactly! Create and moreover check orthographical accuracy. Unfortunately, the software doesn't have a module for marking aesthetics... It soullessly allows us to print applications which will provoke a moan in the HRdepartment or raise a president's acclaim.

A document which we use demonstrates our knowledge and in the end shows whether we are systematic and we can organize our work well.

## An IT M 2 Editing Documents certificate holder IS ABLE TO:

- ✓ Create documents which look good
- ✓ Blend elements of an editor and other office applications
- ✓ Work with documents in a group
- ✓ Use a text editor to make automatic repeated office activities

## The most important aspects of the IT M 2 Editing Documents module:

- Creating document content
  - the special field in Word
  - creating document outlines
  - automatic creation of tables of content, signatures and indexes
- Principles of structuring the document
  - creating, using and modifying styles
  - the use of sections and defining its parameters
- Text formatting
  - document protection advanced functions
  - creating standard bulleted or numbered lists
- Documents management
  - advanced formatting of text
  - using and creating own pattern of documents
  - using serial correspondence
- Editor adjustment
  - creating, copying and setting up macros
  - additional editor applications





## ■■■ IT M3 Spreadsheet Calculations



The fact that spreadsheets are used by mathematicians, financial analysts or book-keepings is obvious.

Spreadsheet calculations can make many jobs easier: a musician's that composes fugue, an artist's who creates new origami or a poet's who composes a new poem with defined rhythm.

Spreadsheet calculations will be useful to each person who keeps a house and manages the money – regardless of their social or professional group.

#### An IT M 3 Spreadsheet Calculations certificate holder IS ABLE TO:

- ✓ Interpret results shown on diagrams
- ✓ Solve statistic and financial background problems (advanced level)

#### The most important merits problem in IT M 3 Spreadsheet Calculations module:

- Managing sheet data
  - quick data entering methods (data series)
  - working with graphs
  - defining and typing of data validation
- Data analysis
  - using functions (mathematic, statistic, searching, logic)
  - cell referencing types (absolute, relative and mixed cell references)
  - formulas referencing multiple worksheets
  - table formulas
  - creating and manipulating pivot tables
  - ToolPack analysis
  - using Solver tool
  - application of Search for results tool

- Formatting data and contents
  - formatting cell values
  - formatting cell appearance
  - creating custom data formats
- Data management in workbooks
  - printing settings
  - organizing data in sheets (chart sorting and filtering)
  - worksheet and workbook protection
- Macro commands
  - introducing function creation in VBA language
  - creating custom macros
  - creating macros conducting stimulation
- Application customizing
  - creating additional application



#### ■■■ IT M4 Databases



We are in a public library. Computers don't work, or maybe there weren't any computers before...? Nobody has time. We must to look for the book on our own. Small, wooden drawers contain the identification cards for the library. We already know where we can find Szymborska, Herbert or Vian.

Digital databases use the same mechanisms as their analogue protoplasts. While getting to the index, it gives back a result related to the phrase searched for. Computers do this much faster- in addition without mistakes.

Knowledge of tasks related to databases isn't necessary for using the public library or Internet browser. However it helps make the information we use at work or in the house systematic.

#### An IT M 4 Databases certificate holder IS ABLE TO:

- ✓ Design and create databases
- ✓ Create requests which give define results
- ✓ Administer databases

## The most important aspects of the IT M 4 Databases module:

- Theory of databases
  - basic notions of database theory: basic terminology and types of data
  - database models and notions connected to them
  - designing relational database Entity Relationship Diagram (ERD)
  - groups of database users and their tasks
- Databases administration
  - securing the integrity of data: input masks and data display format
  - basic operations on data
  - data security
  - database optimization and normalization

#### Queries

- sorting search results according to defined criteria and in a fixed order
- building selective queries in a relational database
- building functional queries
- building join queries
- other query types: parametric, cross-tab and with computational fields
- constructing functional queries using SQL
- Reports
  - creating reports based on a relational database, including grouping and sorting data
  - creating computation-using reports



#### ■■■ IT M5 Multimedia



A minute long advertisement can take us to the world where there are no gravity rights, where colours change better than chameleons and where sounds taste better than a dinner of a king.

In spite of pretence a creating a movie isn't a magical thing. You need only need a mid-range camera, a computer to edit photos and sound, and the idea!

#### An IT M 5 Multimedia certificate holder IS ABLE TO:

- ✓ Use digital sound and picture recorders
- ✓ Process sound and picture digitally
- ✓ Publish multimedia materials in a network

## The most important aspects of the IT M 5 M ultimedia module:

- Transferring multimedia data from digital devices
- Computer graphics
  - advanced operations on selected areas: free transformation, saving in a channel, masks: creating, modifying, deleting, gradient masks
  - advanced operations on layers: flattening the picture, levelling, the attributes of layers and blocking them
  - operations on objects
  - work-supporting elements
  - joining raster and vector graphics
- Digital sound editing
  - removing simple interferences from audio recordings, adding pre-defined sound effects.
  - multitrack editing

#### ■ Film

- adding the reader's voice / commentary to the scenes, dynamic modification of the volume level
- operations on clips: adding effects, hiding clips without removing them from the project, title screens and credits
- exporting a film into a compressed file
- Computer animation
  - basic notions and definitions connected with animation
  - creating and editing objects, defining a symbols library, creating short animations, smoothing hand-drawn shapes
  - combining several independent symbols into one moving object
  - adding sound to the animation



## ■■■ IT M6 Information-Communication Technology



A young man hasn't left his room for more than a year. He respires, excretes, sleeps and threatens to kill himself when somebody tries to help him with his addiction. In his room, there are no syringes. In his room there is only a computer with a connection to the internet.

Of course, this is an extreme and dark vision; however it is currently very common. Often checking the notifications' list or e-mails is the first symptom of digital addiction.

On one hand, the internet gives enormous possibilities, but on the other there is danger — especially in a social area. Knowledge of Information-Communication Technology is not only necessary to wisely arise in the network, but also to be able to escape.

## An IT M 6 Information-Communication Technology certificate holder IS ABLE TO:

- ✓ Configure an inbox
- ✓ Search for information on the internet
- ✓ Register own domain

#### The most important aspects of the IT M 6 Information-Communication Technology module:

- Web browser, searching for information
- Electronic communication, an email client
  - e-mails
  - using a digital signature
- RSS channels
  - data source subscription
- Internet communicators
- Internet domain registering
  - domain registration
  - changing delegation of registration domain
  - redirecting domains to IP, URL
  - records A, Mx, Cname (records management DNS)
  - transfer of Romains
- Hosting
  - concept related to hosting
  - establishing WWW account
  - establishing e-mail account
  - establishing ftp account

- Discussions groups, groups in social portals
  - establishing discussion groups
  - creating groups in social portals
- Voice and video chat, group chat
  - getting voice connection
  - getting video connection
  - getting group connections
- Documents in a network
  - creating, editing and publishing documents in a network
  - importing and exporting network documents
- Mail server, www, ftp configuration
  - server statistics
  - creating an ftp account with different levels of access
- Discussion groups administration
  - users' administration
  - setting users' authorizations
  - moderating



## ■■■ IT M7 Mobile Technologies



The personal computer concept reached a new meaning when mobile phones started to take photos, record sounds, send e-mails and browse WWW pages. When we add satellite navigation and wireless network it turns out that these small devices contain a rich area of knowledge.

## An IT M 7 M obile Technologies certificate holder IS ABLE TO:

- ✓ Use all functions
- ✓ Create own application setting up in a mobile
- ✓ Connect many mobile devices and use their common potential

## The most important aspects of the IT M 7 M obile Technologies module:

- Mobile phones
  - connection between mobile phone and computer
  - bluetooth wireless connection technology
  - JavaM E platform
  - IDE and emulator service
- GSM network
  - GSM Network construction 2.2.
  - roaming, principles of operations
  - construction and operations of data transfer
  - UMTS networks
- Wireless computer network
  - basics of construction and operating WLAN networks
  - IP configuration
  - configuration of Firewall services
  - enlarging a reach of working of wireless Network
  - encryption of wireless networks

- Mobile phones software
  - Java M E platform
  - WAP application protocol
- Mobile devices
  - work with emulator of mobile devices
  - connecting with remote resources
  - IM communication (Instant messaging)
  - mobile operating systems
  - smartphones
- Global Positioning System (GPS)
  - using GPS in mobile devices
  - planning itinerary from level of computer and mobile device
  - synchronisation of itinerary with mobile device
  - geotagging of photo
- Satellite navigation system
  - basics construction and operating satellite navigation
  - GPS devices. PNA-class devices



## ■■■ IT M8 Business Graphics



A conference room. 100, or maybe 150 people. In the first rows, there are representatives of a local government, labour market institutions and businessmen. There is also a video recorder and a few cameras in the hands of photographers. A master of ceremonoes announces the next speaker. Perfectly measured 13 minutes finished with only 5 slides. Unusually expressive slides composed only from pictures which merged with ideal synchronisation, point intonation and impeccable silhouettes brought about the desired effect.

This was the "zen" of presentation, "kung-fu" in the best edition.

That was something to be jealous about...and to learn!

## An IT M 8 Business Graphics certificate holder IS ABLE TO:

- ✓ Create a presentation project
- ✓ Create information materials
- ✓ Conduct a presentation

#### The most important aspects of the IT M 8 Business Graphics module:

- Formatting slides
  - formatting text in a slide
  - creating special colour effects
  - downloading slides from another presentation
  - modifying shapes, charts and illustrations
- Creative presentation
  - choosing type of slide show
  - different options of the same presentation
  - controlling animation
- Interactive presentation
  - adding sounds and videos
  - creating own soundtrack
  - creating and defining action
  - creating and defining links

- Presentation customizing
  - speaker's help
  - defining a way of working a slideshow
  - optimisation of print
- Cooperation of Power Point with devices and other programmes
  - recording a presentation on CD by Power Point
  - converting a presentation into a website
  - creating access to a presentation cooperation with Outlook
- Databases security in a presentation
  - safe format of presentation
  - authorization limited by password
  - digital sign in power point file





## ■■■ CS M1 Programming



We get up, wash with, dress, eat breakfast, leave the house. Then we try to get to work or school. Here we make further steps, often repetitive. We operate on the basis of the algorithm. Fortunately, our own, and not the Central equalizer, sang Ciechowski Gregory.

Describing reality as zero-one logic is abstract and fascinating task. Programming due to the steadily progressive computerization is also an increasingly sought after skill in the labour market.

## A CS M 1 Programming certificate holder IS ABLE TO:

- ✓ Create and write algorithms
- ✓ Interpret source codes
- Optimize solutions

## The most important aspects of the CS M 1 Programming module:

- Create a class. Object class implementation
  - creating a class: field, method, and constructor
  - creation of objects: NEW operator
  - static fields and methods
  - finalizing the methods (finalizers, destructors)
- Inheritance
  - conclude with a class and inheritance
  - overloading methods (including constructors)
- Encapsulation
  - reasons for encapsulation
  - encapsulation of Modifiers
  - encapsulation and inheritance

- Polymorphism
  - covering methods
  - the causes of polymorphism
  - virtual methods
  - abstract classes (interfaces)
- Visual Programming
  - using a graphical user interface
  - the use of basic components: label, textbox, buttons, check boxes, slider
  - interactivity with the application. Supports mouse and keyboard
  - drawing and filling of areas, text and fonts

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- Introduction to generic programming
  - functions and class templates
    (or generic classes and methods)
  - static and dynamic polymorphism

## ■ ■ CS M2 Computer Graphics



What has computer graphics got to do with mathematics? Everything!

Hue, saturation, contrast is in fact the number of chips processed by a computer. Written in a coordinate system formed shapes. They are used to modify the calculation matrix. Exponential functions to help separate the colour channels.

Do you work with digital images need to know math? Of course not. However, thanks to the computer graphics can also deal with ... colour-blinds.

#### A CS M 2 Computer Graphics certificate holder IS ABLE TO:

- ✓ Obtain material for use in the project
- ✓ Use the tools for graphics
- ✓ Prepare the graphics for publication

## The most important aspects of the CS M 2 Computer Graphics module:

- Creating and editing raster images
  - creating selections: setting the size of the selection, magnetic selection, according to the colour range
  - operations on layers: layer masks the creation and editing
  - painting and retouching images and applying filters: deformation of images, filters: noise, pixel print, lighting effects
  - creating shapes, paths and text editing: drawing complex shapes and paths, export routes, writing and editing text in the box and paragraph formatting
- Creating and editing vector images
  - working with vector: creating and editing complex shapes, editing Bezier paths, transforming objects, the properties of the contour, the use of spot colours
  - entering and editing the text: text wrap objects, placing text on paths
- Preparing graphics for publication on the screen
  - publication of the image on the web: advanced graphics optimization
- Preparation of graphics for print
  - preparation of graphics for print: export image to commonly used graphic formats used for traditional printing TIF,EPS



## ■ ■ CS M3 Web Application Development



A simple website can be created anyone in a few hours. However, most portals, which we use every day, are very technologically advanced systems. Servers placed in air-conditioned rooms support calls, and systematically process the information collected in a database. In the office there are working teams of programmers, graphic designers, specialists in internet marketing, content and copyright.

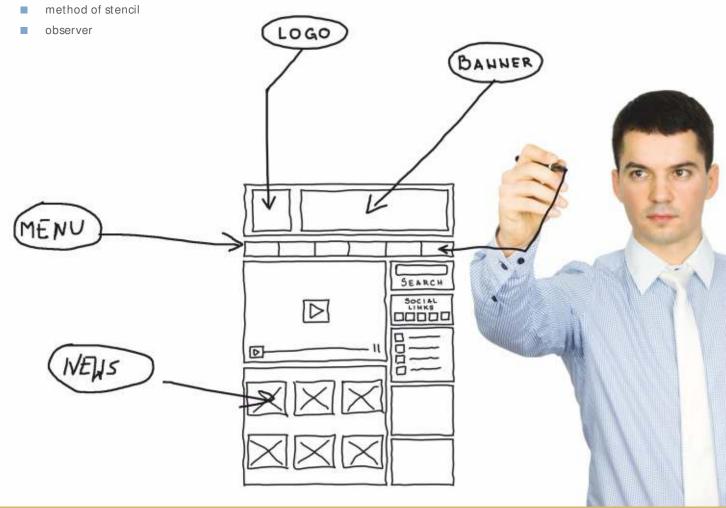
## A CS M 3 Web Application Development certificate holder IS ABLE TO:

- ✓ Choose the right tools for the project
- ✓ Publish and administer
- ✓ Position the application on the internet

#### The most important aspects of the CS M 3 Web Application Development module:

- Architectural models
  - MVC architecture (Model View Control)
  - loC architecture (Inversion of Control)
- Design Patterns
- Design Patterns (creative)
  - factory / plant abstract
  - factory method
  - singleton
- Structural patterns
  - adapter
  - decorator
  - facade
- Functional patterns
  - iterator

- Object-Oriented Principles
  - the principle responsibility of a single (Single responsibility principle)
  - the principle of open-closed (open / closed principle)
  - Liskov substitution principle
- Object-Oriented Techniques
  - serialization and caching (memcached) objects
  - the structure of objects by means of reverse engineering (Reflection API)
  - validation code snippets for using unit tests (PHPUnit)



## ■ ■ AI M1 Two-Dimensional Design (CAD 2D)



Freehand technical drawing is demanding. The designer must be patient, precise and calm. The work is tedious and with the widespread use of computer-aided design - it would seem completely pointless.

Preparation of an advanced computer project without leaving aside all other considerations - is simply not viable. While preparing the hand of the same project, which has not learned the "analogue of humility" might be dangerous.

## An Al M1 Two-Dimensional Design (CAD 2D) certificate holder IS ABLE TO:

- ✓ Create technical documentation
- ✓ Resize and modify objects
- ✓ Prepare the draft for printing

#### The most important aspects of the AI M 1 Two-Dimensional Design (CAD 2D) module:

- Basics of creating electronic technical documentation
  - input of system variables
  - commands: the user defining shortcuts, keyboard shortcuts in the file menu, edit acad.pgp
  - security: Securing the drawing with a password, electronic signature, electronic signature verification
- Creating objects
  - creating, inserting, and modifying Dynamic Blocks
  - blocks: creating and saving, inserting blocks into drawings, use of data center design
  - attributes: defining and editing, use of export attributes of the blocks to create lists of items

- Cooperation with external objects
  - links to other drawing files: attach and detach links, links management (status, hierarchy), joining the selected elements, editing and trimming links
  - databases: Data source configuration, database manager, connections, labels
- Manipulating objects
  - selection of filters using the properties / attributes and layers / levels
  - automatic object selection: SWYBIERZ, GETSEL
- Precision drawing and dimensioning
  - creating a user-hatch pattern
- Print

## ■■ AI M2 Three-Dimensional Design (CAD 3D)



Antoni Gaudi 's projects are undoubtedly architectural pearls.

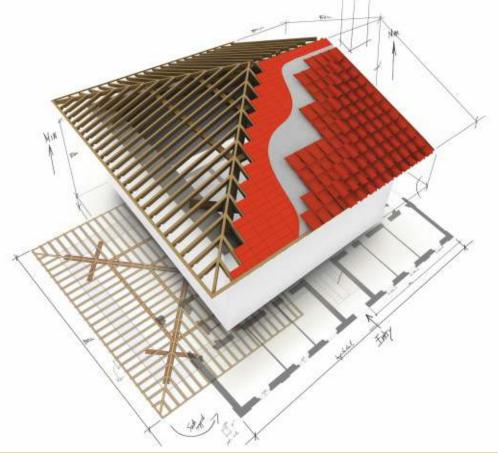
If they were created using computer-aided design of space they would surely not be better. However, there would probably be more of them.

#### An Al M2 Three-Dimensional Design (CAD 3D) certificate holder IS ABLE TO:

- ✓ Model three-dimensional objects
- ✓ Create a realistic scene
- √ Reproduce the mass

## The most important aspects of the AI M 2 Three-Dimensional Design (CAD 3D) module:

- Modifying 3D Objects
  - modification: 3D polylines, surfaces and vertices of the surface. Holders of three-dimensional objects
  - the FLATTERN command as a tool for Express Tools to flatten 3D objects. Creating two-dimensional representation of the objects indicated
  - breaking 3D objects into sections, grids, wall 3D regions
- Plans and sections of solids
  - creating a viewport in paper space. Projections and sections in viewports created
  - solid cross-section using the SECTION command is created as a region
- Modification of Solids
- Cooperation with external objects
  - OLE technologies: Embedding / linking a file and viewing it as a 3D object
  - export and import of the ACIS format. Reading and writing in the ACIS format
- Rendering
- Cooperation with external 3D objects
  - databases: Data source configuration, database manager, calls the label
- Programming
  - visual Basic: the use of ready-made programs VBA VBA editor create, modify and delete macros



## ■■■ PI M1 e-Learning



Auckland, New Zealand – 21-year old carpenter. Romania, Bucharest – beautiful and unusually talented person working on a doctorate in humanities. They are interconnected by a teacher – student relationship and a passion for medieval Arabic culture.

E-learning platforms make it possible to take up an education regardless the place of living. On the one hand, it is sufficient to create a source of knowledge with the support of computer tools, on the other hand start to use it.

## A PI M 1 e-Learning certificate holder IS ABLE TO:

- ✓ Match an adequate platform to the demand in the area of remote learning
- ✓ Create interactive courses
- ✓ Conduct training sessions
- √ Manage an e-learning platform

## The most important aspects of the PI M 1 e-Learning module:

- Information about e-learning
  - problems related to e-learning
  - problems related to gaining methodical materials for trainings
  - electronic trainings creation methodology
  - remote learning process methodology
  - standards of e-learning
- Categories and courses
  - courses categories creation
  - course creation
  - course content management
- Statistic materials
  - files
  - textual pages
  - websites
  - catalogues
  - multimedia

- Interactive materials
  - tasks
  - lessons
  - quizes
  - scorms
- Social portal elements
  - chats
  - forums
  - workshops
- Service administration
  - moodle installation
  - website configuration
  - users' profile creation
  - the roles in moodle
  - supplementary modules
  - resources archiving



#### ■ ■ PI M2 Healthcare Service



A child woke up with a fever. It had cold and red ears. Parents quickly log in to the electronic out-patients clinic. A doctor conducts a remote examination and suspecting an infection prescribes an antibiogram test in the nearest twenty-four-hour laboratory. In 3 days the results are in the system. The parents receive the information and go to visit a doctor. The doctor confirms a consultation and gives a prescription which the system finds in the nearest chemist's shop offering the drug. The drug is matched optimally.

This description will stay only a vision for the future if medical, administrative personnel and patients can't use the technologies which currently give such wide possibilities.

#### A PI M 2 Healthcare Service certificate holder IS ABLE TO:

- ✓ Service the system of patients registration
- ✓ Card index service
- ✓ Process and analyse statistic data in the healthcare service

#### The most important aspects of the PI M 2 Healthcare Service module:

- Work with a text editor
  - basic rules of working with documents
  - creating document content
  - creating document structure
  - formatting the document
  - printing
- Work with a spreadsheet and its application in a healthcare service
  - basic principles of working with spreadsheets
  - data management in the worksheet
  - data analysis

- Practical application of databases in a healthcare service
  - basic information about databases
  - information on the area of application databases in the health service
  - working with formulas
- Internet
  - browsing websites
  - searching for information
  - e-mail



#### ■ ■ ■ PI M3 Tourism



Dry volcanic exhalation or the escape of the earth's magma is a phenomenon quite common in Iceland. In the Beskid Sadecki (Poland) two exceptional places are known mainly by local people - one is called "Bulgotka" and another "Dychawka". Both are beautiful. Both are also deadly to insects and small rodents. People in their vicinity for a long period of time will surely feel the vertigo caused by over 90% CO2 concentration.

Support for tourism is primarily the ability to promote the region as well as places that attract tourists to the empty hotel rooms. You need to be the tools by which the geologists from around the world will learn about local "Bulgotkach" and "Dychawkach".

## A PI M 3 Tourism support certificate holder IS ABLE TO:

- ✓ Use the advanced reservation systems
- ✓ Effectively search for travel information
- ✓ Use the tools to promote tourism activities

#### The most important aspects of the PI M 3 Tourism support module:

- Introduction to the knowledge of tourism and computerization
- Review of IT solutions
  - commercial software and free open source
  - management of Information Systems
- The use of spreadsheets and databases
- Multimedia and DTP in tourism
  - graphics and desktop publishing programs and their use in tourism
  - production of the advertising movie
  - managerial and presentation graphics
- The use of Internet and e-Commerce
  - statistics and trends of Internet usage
  - tourism institutions websites
  - CM S systems and its usage
  - e-Tourism, e-Commerce, e-Invoicing, Google AdWords
  - VoIP Telephone internet, teleconferences
  - searching for information on the web
- Design and management of resources
- Customer Relationship Management. CRM Systems
- Computer Reservation Systems and Global Distribution Systems
  - Computer Reservation Systems CRS
  - CRS and GDS systems
  - usage of CRS systems in tourism
  - Global Distribution Systems in practice
- Specialized IT systems Tourism and Recreation (T&R)
  - Specialized Information Systems (SIS) to support the activities of tourism enterprises
  - support systems of work in different areas (restaurant and catering, travel agencies, hotel, tourist information)
  - booking programs
  - supporting SSI T&R on chosen examples



#### ■ ■ PI M4 Multimedia in Education



Chalk and black boards belong to these sets, which fall into oblivion rather without regret. This is not only because of teachers' health problems, but also because the digital equivalent of an array of electronic pens instead of chalk can do much more.

Interactive table displays in the lesson will engage students, assess, remember everything, and at the end put it on the Internet. However, it does not replace the teacher, his knowledge, experience, or authority.

#### A PI M 4 M ultimedia in Education certificate holder IS ABLE TO:

- ✓ Create multimedia teaching materials
- Handle multimedia devices supporting the teaching process
- Search for and modify multimedia materials obtained from the Internet

## The most important aspects of the PI M 4 M ultimedia in Education module.

- Basic concepts related to computer graphics
- Raster Graphics
  - manipulation of the image and its elements
  - operations on layers
  - correction and filters

- Multimedia presentation in the teaching process
  - presentation and its importance in the teaching
  - Slide Master View and Titles
  - insert an audio file into the slides
  - the graphics in the presentation
- Interactive Whiteboard
  - basic information on the interactive whiteboard

  - presentation in Power Point using the interactive
  - interactive for the
  - capturing images and video recording



## ■■■ PI M5 Computer in Primary Education



The youngest world learns best through play. To include the computer, we can monitor and analyze the progress of individual students and the entire group. Students in grades I-III without exception begin to benefit from modern technology, and it very quickly becomes something natural for them...

## A PI M 5 Computer in Primary Education certificate holder IS ABLE TO:

- ✓ Carry out the lesson using the computer
- ✓ Create their own educational materials

#### The most important aspects of the PI M 5 Computer in Primary Education module:

- Computer skills and system administration
- E-mail, searching and using information and multimedia
- Creation of texts, drawings, multimedia presentations
- Digital devices, their use and the materials produced by them
  - the use of equipment (camera, digital camera, a microphone) to the acquisition of multimedia materials from the environment.
  - attaching and transferring multimedia content to your computer
  - differentiation of primary processing formats and multimedia materials
  - fundamentals of image composition and the principles of its creation (for static and dynamic images)
- The risks arising from the use of a computer, internet and multimedia
  - risks to health
  - the problem of anonymity contacts
  - awareness of the need for self-restraint when using the computer, internet and multimedia
  - safety in the use of computers and the internet
  - copyrights and the possibility of their violation
- Basics of e-learning
  - publishing teaching content
  - controlling the learner



#### ■ ■ ■ PI M6 e-Office



In my Office are working people, with all the relevant advantages, disadvantages and weaknesses. In my office I can arrange all matters in one position. People do not have to come personally to my Office. I can turn on the computer and I'm already there.

In the end it's my Office ...

#### A PI M 6 e-Office certificate holder IS ABLE TO:

- Operate an Electronic Inbox
- Use electronic document circulation
- Use the electronic signature

## The most important aspects of the PI M 6 e-Office module:

- Conducting an information service office and public information bulletin
  - designing the structure of the Public Information Bulletin (BIP)
  - supporting CMS-design and modification of the site
  - administration of the Public Information Bulletin
- E-signature in public administration practice
  - signing documents, e-mail correspondence multiple signing
  - signature verification of different certificates suppliers
  - time marking
  - file encryption

- Practical application of the workflow system
  - supports E-filing Electronic Boxes (ESB)
  - registration of paper and electronic correspondence, forms, emails, faxes
  - the internal circulation of correspondence, decreeing, correspondence to the message, a copy of the correspondence
  - electronic service of documents
  - sending documents to another unit of public administration
  - the establishment and maintenance of the case
  - generating and circulating internal documents
  - publishing documents on the BIP and the news
- Electronic Platform of Public Administration Services (ePoPAS)



## ■ ■ PI M7 e-Marketing



The power of information influence in the network is huge. It can tip the scales when making decisions or significantly increase the sale of individual products. It can also destroy. The information must get to the individual recipient at the exact time. Knowledge of how to do this is presently the most wanted ability on the labour market.

## A PI M 7 e-M arketing service certificate holder IS ABLE TO:

- Analyse different market situations
- Use computer tools for efficient internet promotion
- Increase sale of products and services

## The most important aspects of the PI M 7 e-M arketing module:

- e-Marketing basics
  - the definition of a need and a product
  - the definition of e-Marketing
  - using e-Marketing
- Setting e-Marketing goals
  - e-Marketing and economic calculus
  - customer retention
  - promotion and creation of the image of the need and a product on the internet
- Reaching goals with e-Marketing tools
  - a website
  - Social Network Services
  - Internet Resource Catalogues
  - creating the content
  - instant messaging
  - micro blogging

- advertising portals and auctions
- locators
- ePR
- e-mail marketing
- CRM Customer Relationships Management
- partnership programs
- Self-analysis of e-Marketing tools efficiency
  - measuring the effectiveness of the tools used
  - corrective actions
  - niche searching
- Errors and threats
  - spam
  - positioning errors
  - cyber squatting
  - the integrity of broadcasts



## ■■ PI M8 Interactive Technologies



Sunday night. A family watches quiz show. A question was given. Below there are possible answers. Sunday night. A family watches a quiz show. A question was given. Below there are possible answers. A child who started education 3 years ago instinctively reaches for a remote control and presses a colourful button. The man in a suit can't see the bid, so the child runs up to a television and bids manually. The application was registered with no. 1410. The parents are proud of the child.

Interactive technologies are commonly used by the entertainment industry. More often they are used by the educational sector where information transfer is even larger.

#### A PI M 8 Interactive Technologies certificate holder IS ABLE TO:

- ✓ Conduct lessons with using the interactive whiteboard
- ✓ Apply an electronic system of voting as a form of checking knowledge

#### The most important aspects of the PI M 1 Interactive Technologies module:

- Basic information related to interactive technologies
  - technologies applied to interactive whiteboards
  - voting systems
  - tablets
  - visualisers
- Interactive whiteboard
  - writing and removing notes
  - Power Point presentations with usage of an interactive whiteboard







rules of working a voting system

texts processing

a mode of working with the system

results analysis



## ■■ PI M9 Graphics for Photographers



A family photo album incrusted with silver, opened only on special occasions. Inside, grandpa's photo when he was 34. A tall man in a black, leather coat, with a hat and with a pipe in his mouth. Suffering is inscribed in his face and he has calm in his eyes. The neglected photo is put into a scanner with precision. At the beginning we have to deal with moiré effect. Then we can concentrate on paper perforation.

Pictures lasting on analogue films are similar to sounds on black discs - beautifully imperfect. Working with digital pictures requires not only great knowledge of software. The result will even better if a graphic has a sense of the historical, cultural and social aspects.

#### A PI M 9 Graphics for Photographers certificate holder IS ABLE TO:

- ✓ Conduct retouching of digital photos
- Create a photo gallery
- Use the internet to promote photos

## The most important aspects of the PI M 9 Graphics for Photographers module:

- Photo types and storing photos
  - downloading photos from a digital camera
  - scanning negatives
  - digital photo types and formats (RAV, JPEG, other)
- Image processing
  - working on layers
  - masks masking techniques
  - collages and layer masks
  - filters and their application
  - panoramic photos

- Presenting photo
  - preparing photos for print
  - presenting photos in Webspace
  - online photo galleries
- Photography trade and use
  - signing photos watermarks
  - buying and selling photos online
  - copyright



## ■ ■ PI M10 Robots



In 1942, Isaac Asimov created 3 rights of robots which were supposed to be a foundation of digital morality:

- 1. A robot can't hurt a person and can't perform an activity which can be harmful to a human.
- 2. A robot must be obedient to human commands, unless they are contradictory with the first right.
- 3. A robot must protect itself, unless it is contradictory with the first and second right.

Since robots have stopped to execute series of programmed activities and have become able to make decisions - application of these rights are now out of the literature area.

#### A PI M 10 Robots certificate holder IS ABLE TO:

- ✓ Compose and configure a robot according to the required functionality
- ✓ Program a robot
- ✓ Conduct virtual simulation

#### The most important aspects of the PI M 10 Robots module:

- Building a robot
  - the basic elements that comprise a typical robot
  - division of robots
  - features of robots
- The structure and functions of Microsoft Robotics
- Developer Studio
  - components of the MSRDS package
  - the functions of each element MSRDS package
- Operation and basic elements of visual programming
  - basic concepts of programming
  - visual programming (drag and drop)
  - create comments
  - defining variables
  - using the function: if, switch, join, merge, calculate
- Creating programs using a visual programming language
  - the principle of combining elements
  - control flow
  - engine (Generic Differential Drive)
  - the function translating text to speech ("text is speech")
  - controlling a robot: Direction Dialog and Simple Dashboard
- Sensors
  - touch sensor (Generic Contact Sensor)
  - image recognition sensor (Webcam)
  - acoustic sensor (Generic Sonar)
- Visual simulation environment
  - opening and saving scenes
  - adding, deleting, moving items (entities)
  - creating screenshots
  - manipulation of the camera
  - modifying the physical parameters of the simulated environment



## ■ ■ PI M11 Document Circulation Management



Every day in companies and institutions, hundreds of documents are collected into binders and closed in file cabinets. Electronic documents are becoming files which are collected in catalogue structures on servers or in our personal computers.

Further versions sent to recipients enlarge the concept of a document. Important documents often contain commercial secrets or personal data whose processing is regulated by an Act.

## A PI M 11 Document Circulation M anagement certificate holder IS ABLE TO:

- ✓ Decrease company costs through efficient workflow management
- Customize the software to the needs and possibilities of a company
- Create procedures and internal standards of electronic communication

#### The most important aspects of the PI M 11 Document Circulation M anagement module:

- Correspondence
  - organization of correspondence
  - own correspondence
  - received correspondence
  - e-mail
  - official correspondence
- Documents
  - the concept of library resources and directories
  - changes in documents
  - document history and versioning
  - access rights to resources
- Parameterization of resources
  - search

- Parameterization entities
  - search
- Workflow management
  - schema of the organization
  - delegating tasks and deadlines
  - statistics
  - analysis of events and procedures
- Data Security Policy
  - processing personal data
  - user access control
  - software updates

## ■ ■ PI M12 Security of Information



Checking the security level of information in a company or institution is extremely easy. The only thing needed is a colour pen drive. The first step is to place it near the main entrance. Being picked up by a normal worker may be a warning signal. If a pen drive finishes in an administrator's hands, we can say that the awareness of information security between workers is on right, high level. If, however a worker decides to check what information the colour box contains - we can admit that we've lost.

#### A PI M 12 Security of Information certificate holder IS ABLE TO:

- ✓ Develop procedures to ensure the security of information processing
- Choose the right tools
- Detect, identify and respond to the occurrence of the incident

#### The most important aspects of the PI M 12 Security of Information module:

- Inspection analysis of security
  - inventory of resources
  - assessment of risks and losses
  - identification of vulnerability
  - strategies of designing information security
  - evaluation of current state, testing
- Security of information resources
  - awareness
  - access limitation
  - identification, authentication and authorization methods
  - models and rules of accountability
  - security of information administrating
- Incident detection
  - intruders and their methods
  - methods of incident detection
- Reaction incident management
  - activity planning
  - detection and identification of incidents
  - reaction to the incident: notification and limitation
  - estimating damages
  - restoring the system after the incident
  - responsibility
- Reflection and improvement
  - incident documentation and evaluation
  - modification of information security plan
  - law aspects of information security
- Security of transmitted information
  - the risk of transmitted information
  - data encryption
  - electronic signatures and their infrastructure



#### ■ ■ PI M13 Green Office



We need energy. More and more... we need light bulbs, cars, televisions, computers, telephones, alarm clocks, cameras... click, click, switched on or off. Run. Faster and faster...

One small battery thrown in the trash effectively poisons 1m3 of soil. Cadmium, lead, mercury and nickel together with water and food get into our bodies. The next generation will get mental retardation, hydrocephalus, and paresis as a present from us.

Respect for the environment and for each other, fortunately, you can learn - at home or at work.

#### A PI M 13 Green Office certificate holder IS ABLE TO:

- ✓ Use management procedures in line with the Community Eco-Management and Audit Scheme (EMAS)
- ✓ Optimize operating costs

#### The most important aspects of the PI M 13 Green Office module:

- Buildings and environment
  - the design of buildings and their location
  - planning the location
  - architectural and construction solutions
  - HVAC Systems- intelligent systems of circulating heat, cooling and ventilation
  - alternative sources of energy their use in office buildings
  - designing the environment office gardens

- Administration and management
  - Environmental Management Systems (PN-EN ISO 14001:2005, EMAS)
  - energy management in a Green Office
  - optimising the use of natural sources of light and sunlight
  - solutions that increase productivity and efficiency of artificial lighting
  - exploitation of equipment and office supplies
  - measurement and calculation of losses
- Efficient management and use of office supplies for recycling
  - recycling
- Promotion of attitudes -proecological education



## ■■■ PI M14 Planning and Tracking Projects



Construction of highways, concerts, raids on smugglers, repairing the roof, a trip to Kilimanjaro, marriage, participating in the marathon, the privatization of the shipyards, the match...

In all these endeavours some common elements can be distinguished, such as start time, end time, the necessary resources to achieve the purpose, and budget. If we try to predict the risk and how to deal with it, we can safely say that we realize the PROJECT.

## A PI M 14 Planning and Tracking Projects certificate holder IS ABLE TO:

- ✓ Choose the methodology and tools for a specific project
- ✓ Plan the use of resources
- ✓ Track the progress of the work

#### The most important aspects of the PI M 14 Planning and Tracking Projects module:

- Project management methods
  - classical methods and their characteristics. PMI and Prince2 methods
  - agile methods: MSF, Scrum, RUP
  - project management methods
- Planning the project time
  - the aim of project and methods of its realization.
    Plan of the project
  - the schedule and method of its presentation Gantt charts. Network Planning. Critical path method
  - defining the tasks. Estimating the duration of the task. Cyclic Tasks
  - determining the relationships between tasks.
     Predecessors and successors. Types of relationships. Delay
  - advanced parameters for tasks: limitations deadline, task type, a calendar of implementation

- allocation of resources to the task. Types of assignment. Changing the assignment
- the project budget. Cost Reports. Cash flow report
- Managing the process of implementation and completion of the project
  - tracking the progress of the work
  - controlling the progress: deviational method and earned value
  - detecting the problems
  - modifying the project plan
  - gathering information about the course of the project
- Elements of Project Portfolio Management
  - inserting sub-projects
  - the analysis package of projects. Status reports
  - management of supplied elements



## Didactic materials

The ECCC Central Training Centre has prepared various ECCC didactic materials. The set of materials is composed of a textbook (2 volumes which cover the whole area of IT) and a compact disc. The ECCC textbook has been prepared by practical and theoretical experts in computer science. Didactic materials can be helpful in self-learning as well as in conducting trainings.

All didactic materials have a sign of accordance with the ECCC standard given by the ECCC Foundation.

As an additional source of knowledge, the Central Training Centre makes the ECCC platform, where we can find informative lessons based on the current syllabi, accessible. The lessons are divided into 8 modules. Each module contains several short tasks. Each examinee should complete the tasks. Inaddition to the contents are print screens and movies showing the mode of conduct. Each module is summed up with an interactive test which contains tasks from the individual area. The test verifies whether the user has become familiar with the material presented in the lessons.

Training in the European Computer Competence Standard (ECCC) is a variety of ranges and levels of certifying competences. The matrix of competences allows a programme of training to be fit to the individual needs of the beneficiary – in the context of professional job and personal predispositions and interests. There is a possibility to gain additional strategic points thanks to taking into consideration needs of women and men. The strategic criteria of vocational training confirm competences and results in examinees receiving an international

certificate.



Training in the European Computer Competence Standard ECCC is a great tool to prove the results of projects financed by the European Union. After each training module, participants have the possibility to pass an exam to verify their knowledge. All participants receive a certificate with a percentage result of the exam. In addition, analysis of the exam's results supports monitoring the aspects of training.





# ■ Training in accordance with ECCC standard in projects co-financed by European Union



- "Be professional" the ECCC training for students of Agricultural Schools in the District of Semiatycze. The ECCC Training Center has begun to implement IT training for the youth of the School of Agriculture in Czartajewo and the School of Agriculture in Ostrożany, in the District of Semiatycze (Podlaskie province). The training will be conducted in the European standard of the Computer Competence Certification ECCC and will include seven units in the field of Information Technology, namely:
- IT M1 Computer Hardware and Software
- IT M2 Editing Documents
- IT M 3 Calculation Sheets
- IT M4 Databases
- IT M6 Information-Communication Technology
- IT M7 Mobile Technologies
- IT M8 Business Graphics



The 120-hour training sessions will be attended by 50 students (5 groups of 10 people). Classes are to be led by certified ECCC trainers: Edyta Brzozowska, Marek Krasowski and Mariusz Szulc. Participants will receive certified teaching materials and examinations to join the ECCC at intermediate level (B).

This project is carried out within the framework of Human Capital Operational Program, Priority 9. Development of education and competencies in the regions, Measure 9.2. Improvement of attractiveness and quality of vocational education.

"Profession@I trainer" — this is a project being carried out by Lechaa Consulting Sp. z o.o. Company and is directed towards school teachers working in Lubelskie province. Among the different forms of support there are trainings in the ECCC Standard: E-learning (22 hours) — concerning methods of e-learning, goals, contents and methods of e-learning, selected didactic tools and preparation to create an e-course. E-learning course participants have passed the exam in the area of E-learning and have received ECCC Certificates.



This project is carried out within a framework of Human Capital Operational Program, Priority 9. Development of education and competences in the regions, Measure 9.4 Highly qualified personnel of the educational system.

"Motorway-like Training opportunities" - attractive courses and training for working people. The LECHAA CONSULTING Sp. o.o. Company has begun a project on "Motorway-like Training opportunities." (or. "Kształcenie autostradą nowych możliwości"). The project is aimed at working adults, living in the counties of: Bochnia, Brzesko, Dąbrowa, Tarnow, Gorlice, Limanowa, Nowy Sącz and Tarnów.

The support offered by the project includes:

- Career counseling: individual and group
- Courses
  - Floral designer
  - Support for tourism (with ECCC certification)
  - Computer Graphics for photographers (with ECCC certification)
  - Creating web pages (with ECCC certification)
  - Souvenirs decoupage items, felting
  - Computer accounting



- HACCP in tourism
- Design and interior design
- Workshops
  - Information Technologies
  - Creating the image

"Trendy senior" this is the ECCC for working people over 45 years old and is being carried out by 4system Poland Company. The training is directed towards people employed in micro and small enterprises, over 45 years old and living in Wielkopolskie province. The training program includes courses concerning wording texts, using calculation sheets, creating calculation models and databases, browsing websites and communicating on the internet. After training, participants take exams and recieve European Computer Competence Certificate ECCC.



This project is carried out within a framework of Human Capital Operational Program, Priority 8. Regional human resources for the economy, Measure 8.1. Developing a workforce and enterprises in the region, Sub-measure 8.1.1. Support

to developing professional qualifications and counselling for enterprises - call for proposals projects.

"Graduate to measure time"— Lublin University of Technology graduates with ECCC certificate. Between 10/01/2010 and 30/09/1012, Lublin University of Technology in cooperation with the International Centre of Training and Competention from Lublin is implementing the project "Graduate to measure time". The project is financed by the European Union under the European Social Fund, and the project budget amounts to nearly 4 million zł.



The project is aimed to prepare, open and to implement new specialisations in second degrees in Computer Science and to adjust the curricula in the field of IT to market needs.

The project will produce five new Master's specializations in Computer Science, a virtual campus - a platform for communication between students and lecturers, an e-learning system of complementary classical learning and knowledge acquisition system for cooperation with partners from industry. In addition, a new practices system and student internships connected with the preparation of master's theses in cooperation with industry will be implemented. Under the project, students will have the opportunity to participate in a series of International Seminars on Computer Science led by invited eminent experts from abroad.

One of the important purposes of the sub-project is to enable (through training and funding) students of Lublin University of Technology to acquire information technology certifications. The project provides an awareness for students of taking exams like Cisco, Microsoft and the ECCC. The number of tests funded by the project is 90.

This project is carried out within a framework of Human Capital Operational Program, Priority 4. Tertiary education and science, Measure 4.1. Strengthening and development of didactic potential of universities and increasing the number of graduates from faculties of key importance for knowledge-based economy, Sub-measure 4.1.1. Strengthening and development of didactic potential of universities – call for proposals projects.



"Key competences in modern vocational school" - the project being carried out by the Vocational Improvement Institut (ZDZ) in Kielce. The main goal of the project is to strengthen the attractiveness and increase the quality of the educational offer of Vocational Improvement Institution in schools in Busko Zdrój and Kazimierza Wielka - the schools conduct vocational education whose goal is to prepare the student for future employment. The project contains additional English classes, Computer Science, business and cultural and didactic trips. There are 40 participants. The confirmation of their competences will be the following international



- European Computer Competence Certificate (ECCC)
- The European Language Certificate (TELC)
- The International Language Certificate (TOEIC)

This project is carried out within a framework of Human Capital Operational Program, Priority 9. Development of education and competencies in the regions, Measure 9.2. Improvement of attractiveness and quality of vocational education.

"Office Professionals" - this is a project implemented by M CSK Company. The main goal of the project is to back jobseekers in a labour market by increasing their professional competences, and activate the unemployed in Łódzkie province. Each participant has received an individual activity plan, a certificate confirming their competence in English and a vocational competence certificate in a selected area, namely a secretary or an office worker. The participants have also received a European Computer Competence Certificate (ECCC), which proves their computer abilities in one out of seven modules on a basic level.

The computer course was composed of the following ECCC modules:

- IT M1 Computer Hardware and Software
- IT M2 Document Processing
- IT M3 Spreadsheet Calculations
- IT M 4 Databases

certificates:

- IT M5 Multimedia
- IT M 6 Information-Communication Technology
- IT M 8 Business Graphics





"Information and communication abilities development among teachers in Lubuskie province" - this is a project carried out by the Regional Methodical Centre in Gorzów Wielkopolski in partnership with The Center for Improving Teacher Quality in Zielona Góra. The target group constitutes of 300 teachers living in Lubuskie province. They are mainly primary education teachers who want to improve their knowledge in information and communication technologies. The project contains:

- Multimedia in Education 200 participants
- Computer in Primary Education 200 participants

The courses end with an exam in accordance with the European Computer Competence Certificate standard. The exam checks the level of fulfilling competence requirements. The course will be supported by e-learning tools.



This project is carried out within a framework of Human Capital Operational Program, Priority 9. Development of education and competences in the regions, Measure 9.4 Highly qualified personnel of the educational system.

"I want, I can, and I'm able to" – this was a project carried out in cooperation with Niedrzwica Community and Elementary School in Niedrzwica Duża. The project took place in five schools in Niedrzwica Duża Community. The goal of the project is to equalize the educational chances of students from groups with hindered access to education and to diminish the disproportion in the quality of educational services in the mentioned schools. The goal was achieved through different forms of education and sport activities improving students' talents. They had a possibility to receive the European Computer Competence Certificate which is highly valued on the labour market.



This project was carried out within a framework of Human Capital Operational Program, Priority 9. Development of education and competencies in the regions, Measure 9.1. Equalization of educational chances and providing a high quality of educational services performed within the framework of the educational system, sub-measure 9.1.2. Equalization of educational chances of students from groups with hindered access to education and diminishing the disproportion in the quality of educational services.

"Bring back hope". Activation of people in danger of social exclusion in Strzyżowski district – 2nd edition – the project was carried out by Strzyżowski district. The main goal was a professional and a social activation of 80 habitants of Strzyżowski district and provide an easier access to the labour market in 2011.

Each participant took part in 100-hours computer training in the ECCC standard. There were the following modules:

- IT M 1 Computer Hardware and Software
- IT M2 Document Processing
- IT M6 Information—Communication Technology
- IT M 7 M obile Technologies

Each module was concluded with an exam. All participants received the ECCC certificate.

This project was carried out within a framework of Human Capital Operational Program, Priority 7. Promotion of social integration, Measure 7.2. Counteracting exclusion and strengthening the social economy sector, sub-measure 7.2.1. Social and vocational activation of persons threatened by social exclusion - call for proposals Project.

"New perspectives" — this was a project carried out by The Association European Institute of Computer Science Development, at present Humaneo. It was directed towards present and ex-workers of Meat Company JBB in Lyse and their families. The project contained:



- Vocational training office worker
- Professional Skills consulting

rding to the ECCC international standard. It

96 people participated in the project. The computer course was conducted according to the ECCC international standard. It included the following modules: IT M1 Computer Hardware and Software, IT M2 Document Processing, IT M3 Spreadsheet Calculations, IT M6 Information-Communication Technology. At the end of the project an official Gala with the presentation of certificates took place.

This project was carried out within a framework of Human Capital Operational Program, Priority 6. The labour market open for all, Measure 6.1. Improvement of access to employment and support for professional activity in the region sub-measure 6.1.1. Support for the unemployed on the regional labour market.

## ■ Post-graduate studies within the ECCC standard

■■ "An enterprising University" — this is a project concerning education, which is implemented by Higher Pedagogical School — Common Knowledge Company in Warszawa as part of the Human Capital Operational Program. Its main goal is to improve the quality of the University educational offer, qualifications of students and people from outside. Three-semester long post-graduate studies "E-teacher reengineering competences" are being carried out. It lets participants get new key competences on the labour market. To adapt programs of the studies to the current IT needs and employer's requirements, it was decided to carry out studies in the ECCC standard. Graduates will get practical skills in the range of teaching IT and computer science, as well as ECCC trainers' and examiners' rights.

As part of the studies the following modules, fully in accordance with the ECCC syllabi, have been implemented:

- IT M 1 Computer Hardware and Software, Clevel
- IT M2 Document Processing, Clevel
- IT M 3 Spreadsheets Calculations for professionals, B level
- IT M 4 Data Bases. B level
- IT M 5 M ultimedia. D level

- IT M 6 Information-Communication Technology, C level
- IT M 7 Mobile Technologies, Clevel
- CSM1 Programming, B level
- CSM2 Computer Graphics, B level
- CSM3 Web Application Development, Blevel

This project is carried out within a framework of Human Capital Operational Program, Priority 4. Tertiary education and science, Measure 4.1. Strengthening and developing the didactic potential of universities and increasing the number of graduates from faculties of key importance for a knowledge-based economy, sub-measure 4.1.1. Strengthening and development of didactic potential

of universities.

"Development of didactic potential of WSFiZ in Siedlce"- High School of Finances and Management in Siedlce has started Bachelor level studies in the academic year 2009/2010. From 2009 to 2013 it will educate 48 bachelors of landscape architecture on specialty landscape architecture. During the project, 40 university employees will also increase their competences, mainly in the range of multimedia techniques in teaching, computer graphics, and also sets of trainings confirmed with the European Computer Competences Certificate.



This project is carried out within a framework of Human Capital Operational Program, Priority 4. Tertiary education and science, Measure 4.1. Strengthening and developing the didactic potential of universities and increasing the number of graduates from faculties of key importance for a knowledge-based economy.

- "A modern teacher in the information society" Pope John Paul II University in Biała Podlaska has begun a project as a part of post-graduate studies for teachers and education sector employees living in a rural area in Lubuskie province. During studies, students will take exams in 8 modules in the range of IT and two in a professional module, namely "Computer in primary education" and "Multimedia in education" and will receive ECCC certificates. During the studies, there will be several educational trips, thematic workshops and open air activities organized. Activities will be carried out by well —prepared educational staff, using modern teaching aids, for example: multimedia boards, mobile workshops. Part of the activities will be completed using the e-learning platform. A realization of the studies is planned in two editions:
- 1st edition includes 24 students, beginning in January 2011
- 2nd edition includes 24 students, beginning in January 2012

Studies will be conducted in the following areas: computer science, Information technology and primary education according to Minister Education's regulation of 12 March 2009.



This project is carried out within a framework of Human Capital Operational Program, Priority 9.4. Highly qualified personnel of the educational system.

"e-Marketing" Cracow Academy under the name of Andrzej Frycz Modrzejewski organizes postgraduate studies in E-Marketing. The aim of these studies is to provide participants with the latest, practical knowledge of marketing on the internet and to provide modern tools to support its operations. Students will learn the practical use of advertising campaigns on websearch engines, websites, social networking and forums discussions. The program provides for, among others issues, the basics of internet technology, construction and management of web sites, e-commerce, building a relationship with customers, creating and promoting trademarks and products, developing marketing strategies. Students will be prepared for examinations in the European Certification of Competence in Information ECCC standard from the modules: e-Marketing and Creating Web applications.

This project is carried out within a framework of Human Capital Operational Program.



## Promotion of the standard ECCC

#### ■ ■ ■ ECCC open days

The ECCC open day is a proposition for all who are interested in gaining a license as an ECCC Exam Centre, on promotional financial conditions. The Institution which organizes an Open Day will get a 50% discount for the Exam Centre license (for one year).

The ECCC Open day is a media event, organized with support of the Central Training Centre.

The purpose is to promote the ECCC standard and Exam Centers.



## ■■■ "Ambassador" project

The Ambassador Project is an open educational project, addressed to all Educational Facilities. The primary purpose is to promote and develop information society and encourage the development of computer competences, in accordance with the European Certificate of Computer Competences (ECCC). The participants get points for solving computer exercises, participating in actions of informatics groups, taking ECCC exams, and other actions concerning the development of computer competences. Educational Institutions which get the highest number of points will win attractive prices:



- 1st price for school: Multimedia board Smart Board (64 inches)
- 2nd price for school: Multimedia board Smart Board (48 inches)
- 3rd price for school: multimedia laptop or MINDSTORM Srobot

## ■■■ Contest "Write a project plan in ECCC standard and win- contest for projects originators"

Write a project plan and win a prize! The Central Training Centre invites all creators to the contest, which promotes the ECCC standard. To take part in the contest, the written project must consist of at least of one ECCC module, and be registered on the web-site.

In the contest, the following awards are available:

- 1st prize multimedia laptop
- 2nd prize- digital camera
- 3rd prize multifunctional device



## **ECCC Partners**

- Cyprus, Antoniou Multimedia Training Board
- Great Britain, ATC Ltd
- Spain, Continuing Education Center "Miguel Fernandez"
- Spain, Adult Education Center
- France, Developpement Mediterranée
- Germany, eCompeed GmbH
- Sovenia, Euro Mediterranen University
- Portugal, Foundation Ensim Pro Praia da Vitória
- Kazakhstan, Innovative University of Eurasia
- Czech Republic, Institute for Information Society, o.s.
- Portugal, Polytechnic Institute of Leiria
- Slovenia, International School for Social and Business
   Studies
- Greece, K.E.K M.I.T A.E.

- Turkey, Konya Eregli Müfide Aziz Sayin Halk Egitimi
- Merkezi ve Aksam Sanat Okuku
- Turkey, Vocational and Technical Education Center
- Kirgizstan, Ministry of Education and Science of the
   Kyrgyz Republic
- Ukraine, National Academy of Management
- Malta, Sans Frontiers Europe
- Great Britain, Telford Collega of Art and technology
- Italy, Uniwersytet w Boloni
- Italy, Uniwersytet w Rzymie "La Sapienza"
- Great Britain, University of Wolverhampton
- Ukraine, Volyn National University, Ukrainian
- Finland, Valkeakoski Opisto
- Netherlands, Zadkine



