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Layout Design: François Louis Nicolet

Composition: Jorge Llácer-Gil de Ramales

Editorial correspondence: Llorenç Pagés-Casas <[pages@ati.es](mailto:pages@ati.es)>

Advertising correspondence: <[novatica@ati.es](mailto:novatica@ati.es)>

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# CISCO and EUCIP Co-operation in ICT Professional Competencies Development

*Fabrizio Agnesi*

*This article gives an overview on initiatives jointly managed by Cisco and EUCIP to promote professional competencies development through high quality training curricula and certification programmes. In particular the Cisco Networking Academy's curricula "IT Essentials" and the related "EUCIP IT Administrator" certification are presented, as is the role of the Cisco certification system as accredited "elective modules" in the EUCIP professional profiles framework.*

**Keywords:** Cisco, Co-operation, IT Administrator, IT Essentials, Professional Profiles.

## 1 Introduction

The co-operation between Cisco and EUCIP in ICT professional competencies development has grown in recent years, driven by common objectives and synergies between the certification and training offerings of the two organizations.

The EUCIP vendor neutral definition of ICT technical competencies is open to instances of specific technology providers, and its certification system, based on working experience and educational credits, requires third party "elective modules", as the product certification and training courses provided by ICT vendors.

Cisco has a well known certification offering referring to networking technology and related products and since 1997 has developed a not-for-profit, high quality training initiative, the Cisco Networking Academy Program, to teach students how to design, build and maintain computer networks.

Co-operation between Cisco and EUCIP, which started in 2005, has capitalized on the above assets, focusing on two themes:

- The joint analysis of Cisco certification contents against EUCIP Professional profile specifications and their accreditation as learning modules in the pertinent EUCIP professional certifications.
- The proposal of EUCIP IT Administrator as a referred certification for students completing the Cisco Networking Academy IT Essentials curricula.

## 2 The IT Administrator - IT Essentials Initiative

The course "IT Essentials: PC Hardware and Software (ITEPC)", originally produced by Hewlett Packard and acquired and developed by Cisco, provides a comprehensive overview of computer fundamentals and an introduction to advanced concepts. It is intended for individuals who want to pursue careers in IT and gain practical knowledge of how a computer works.

### Author

**Fabrizio Agnesi** is now an independent consultant and collaborates with AICA on EUCIP diffusion projects. He has worked in the Information Industry since the mid-1970s, on Marketing, Planning and Project Management holding a series of senior positions in large ICT corporations. Fabrizio graduated in Business Administration at the Bocconi University of Milano, has been Chair of the Northern Italy Chapter of the PMI, and has been involved in the PMBOK® Guide as a reviewer. He obtained the PMP® accreditation in 2000. <fabrizio.agnesi@eucip.it>

Since its beginnings, the course was also proposed as an option to prepare for the CompTIA A+ examination, a certification for IT technicians with a good market presence in North America.

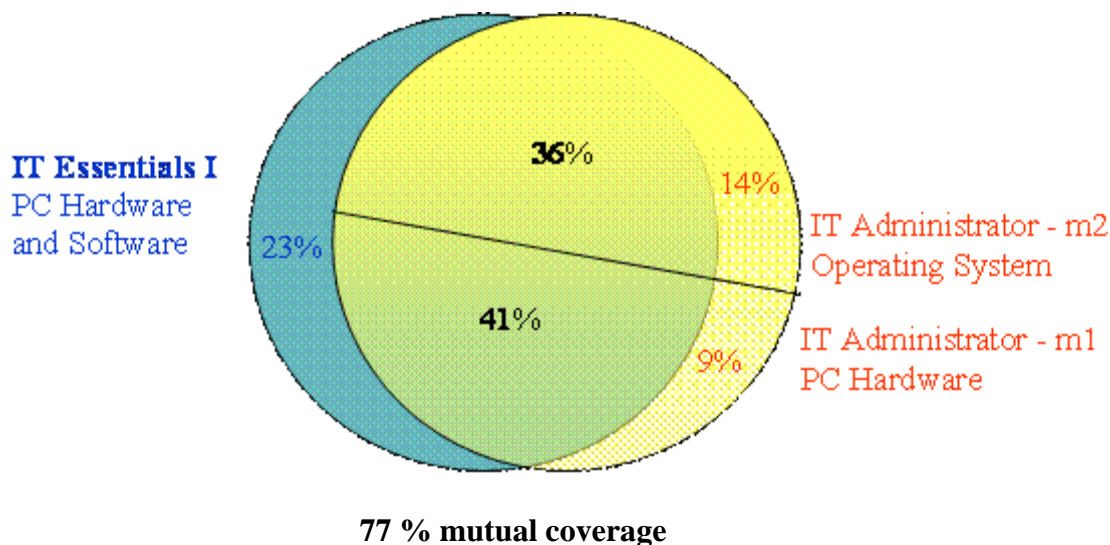
In 2005, the Cisco Networking Academy EMEA (Europe, Middle East, Africa) decided to strengthen the proposal of ITEPC curricula in Europe in order to extend the Academy's portfolio and market presence from its historical networking segment to a more basic and extensive target audience.

Among other actions, Cisco was looking for a European Multilanguage certification to be proposed at the end of the course as a third-party, independent recognition of competencies acquired by ITEPC students.

EUCIP IT Administrator (ITA) was perceived as an opportunity and, based on a relationship between CEPIS and Cisco, a common feasibility study was launched to verify the technical and marketing coherence of ITEPC and ITA.

Under the initial relationship they agreed to work on three areas:

- To verify "theoretically" the convergence of the two programmes comparing the mutual coverage of ITA and ITEPC syllabi.
- To verify "empirically" the effectiveness of ITEPC courses in preparing candidates for the ITA certification.
- To design a common marketing approach in order to



**Figure 1:** Mapping of EUCIP IT Administrator and CISCO IT Essentials.

jointly promote the ITA-ITEPC offering.

The analysis of the syllabi demonstrated a large (77%) mutual coverage between ITEPC 1 and ITA modules 1 (PC Hardware) and 2 (Operating System, Windows flavour) as shown in Figure 1.

The major ITEPC topics not covered by ITA were in the introductory part (IT basics), which is beyond the scope of ITA as it is more related to a user certification like ECDL than a specialist one, and networking fundamentals, which is covered, in a broader and deeper way, by ITA module 4.

ITA topics not covered by ITEPC were mainly related to specific items of a narrower scope and some technologies such as laptops and portable devices that, as we will see later in this article, have been added in the new ITEPC release.

The empirical verification of the course to prepare for certification was tested with an ITEPC class of 21 students who - immediately after completing a standard ITEPC course in Rome, and without any additional preparation after having passed the curricula tests, took the ITA module 1 and 2 exams. All students passed the ITA exams, confirming not only the course coverage but also the didactic effectiveness of ITEPC.

From a marketing perspective it was agreed to focus on secondary technical school students and employees without a formal ICT education, working on IT infrastructure in SMEs or large organizations' local branches. Special terms and conditions were established to facilitate both the students' certification and the Academy's accreditation as EUCIP Competence Centres.

This general approach, agreed at a European level, will be localized in each country by the local EUCIP licensee and Cisco Academy organization.

In the United States, in parallel with these pilot experiences, Cisco launched the development of a major new ver-

sion (v4.0, released in 2007) of ITEPC curricula with the aim, among others, of providing exhaustive coverage of the first three syllabus modules of EUCIP IT Administrator.

ITEPC v4.0 contents, which comprise almost all (96.4%) of the ITA topics, are organized in ten chapters covering all fundamentals and in six further chapters which increase the depth of coverage of key subjects. The sixteen chapters are:

**Part 1: Fundamentals**

1. Introduction to the Personal Computer.
2. Safe Lab Procedure and Tool Use.
3. Computer Assembly Step-by-Step.
4. Basics of Preventive Maintenance and Troubleshooting.
5. Operating Systems.
6. Laptop and Portable Devices.
7. Printers and Scanners.
8. Networks.
9. Security.
10. Communication Skills.

**Part 2: Advanced**

11. Personal Computers.
12. Operating Systems.
13. Laptops and Portable Devices.
14. Printers and Scanners.
15. Networks.
16. Security.

A wealth of teaching tools and materials are employed:

- A complete e-learning course available on the centralized Academy platform, usually blended with lessons and labs provided by each local Academy.

- Hands-on lab activities (with real systems and repair tools, but also supported by virtual laptop and virtual desktop stand-alone tools) in line with the practical orientation of both ITEPC and ITA.

■ Text-book, hands-on presentations and other teacher support materials.

As already mentioned, ITEPC v4.0 covers almost all IT Administrator competencies (including Module 3 LAN and Network Services; except minor items such as hardware trends and RAID systems), but also includes some additional skills either not present in ITA or dealt with in other modules (i.e. security and networks).

Skills not present in ITA include some practical abilities (technical as well as customer communication elements) related to PC maintenance activities, which are one of the key targets for ITEPC in North America.

Local agreements and activities are already set up in Italy and are set to be launched in other countries including Spain, Norway, Romania, and Poland.

In Italy, AICA (CEPIS Italian member society and EUCIP licensee) and ASSINT (the Italian association promoted by Cisco with Academies and other not-for-profit institutions) signed an agreement to promote jointly the EUCIP IT Administrator and CISCO IT Essentials programs.

Activities have already involved six Regional Academies, which have become EUCIP Competence Centres, and through them about 50 local Academies, mainly secondary technical schools joining the Cisco Networking Academy program for the first time in response to the IT Essentials-IT Administrator offer. A group of these Regional Academies has completely translated the ITEPC curricula into Italian and, with the support of AICA, is promoting the joint offering to schools and public education Authorities at both a regional and national ministry level.

### 3 EUCIP Elective Profiles and Cisco Certifications

EUCIP defines a framework of 21 EUCIP Professional profiles encompassing all major ICT professions.

Each EUCIP Professional profile is described in terms of competencies that can be attained through formal study, practical work experience, and professional development activities.

EUCIP Professional certification evaluates candidates' experience portfolio in three dimensions (previous studies, work experience and professional development) in a structured and formalized way through documental review and an oral exam (peer review).

In order to become a recognized EUCIP Professional, the professional development activities and their associated "learning module credits" in the certification system must be qualified as pertinent to one or more professional competencies within the EUCIP framework.

Recognizing the potential value and synergies of their certification programs, CEPIS and Cisco decided to jointly map Cisco certifications (CCNA, CCNP, CCDP and others) onto EUCIP Professional competency categories in order to derive the learning module credits (EUCIP points) associated to each Cisco certification for each EUCIP Professional profile.

The two EUCIP Professional profiles most relevant in terms of Cisco certifications (i.e. with higher EUCIP points)

were, as expected, the Network Manager and Telecommunication Architect profile. It is important to underline that EUCIP points cannot be used to compare different EUCIP Professional profiles because they do not measure the absolute value/importance of a certification, but only their relevance to a specific EUCIP Professional profile.

### 4 Conclusions

ECDL Foundation, CEPIS and CISCO believe that the mass dissemination of the informatics culture and ICT professional competency development represent key levers to improve effectiveness in the use of informatics tools and consequently to promote economic growth and competitiveness.

ECDL Foundation, CEPIS and CISCO also believe that their systems of competence certification (reliable, synergic and widely recognized by the market) are useful tools in order to consolidate individual competences and to bring greater transparency and efficiency to the employment market.

Cooperation on IT Administrator-IT Essentials dissemination and EUCIP Professional learning modules accreditation is proof of the CEPIS and CISCO commitment in the field of ICT competence qualifications and of their willingness to operate within a multi-stakeholder approach, with other initiatives and additional partners, to achieve worldwide development and dissemination of the informatics culture.

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For more information on CISCO IT Essentials, please contact Antonia Herrera (CISCO Systems) <[antherre@cisco.com](mailto:antherre@cisco.com)>.