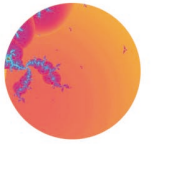
Internet Training Centres Initiative
for Developing Countries

In cooperation with

Cisco Systems
Networking Academy

The ITU Internet Training Centres for Developing Countries:

building the brain trust for the new economy



The Internet and its underlying Internet Protocol have created major challenges for government, policy-makers, incumbent operators and regulators, all of whom need to "re-tool" and re-engineer for the Internet-based economy.

The Internet Training Centres Initiative (ITCI) was established by the International Telecommunication Union to provide affordable and relevant training in Internet Protocol and Internet-related technologies in developing countries with the goal of facilitating their smooth transition to the new economy.

What

Leaders and experts around the world increasingly recognize human capacity building as one of the most crucial ingredients for development. Both developed and developing countries face an acute shortage of skilled IP networking and IT professionals. In developing countries, the problem is compounded by the difficulties of gaining access to training.

"The lack of human resources with Internet and New Economy skills is one of the most crucial constraints facing developing countries in their attempts to bridge the Digital Divide"

Yoshio Utsumi

ITU Secretary-General

Through a unique partnership with key ICT market leaders, ITU works to provide students and telecom/IT professionals in developing countries with access to affordable and relevant training in Internet technology skills in a mentored environment, while fostering a real and sustainable transfer of knowledge.

With a worldwide network of 50 Internet Training Centres by the end of 2003, the ITU initiative aims at strengthening "new economy" skills in developing countries.

The objectives are:

1. to prepare developing nations, and in particular Least Developed Countries (LDCs), to fully participate in the networked economy

2. to train a *minimum* of 50 students per year per internet training centre under a "train the trainers" approach

3. to promote gender-focused Training Centres by proactively encouraging greater participation of women in information technology and the Internet economy through an enrollment target of 30% of female students

4. to help operators to train or retrain their staff on IP technologies, three to four places a year being earmarked for telecommunication professionals

5. to promote the creation, by the selected learning institution, of other internet training centres at local level to to create a multiplier effect on skill-building in IP technologies in the country

Who

ITU is partnering with industry players, government agencies, not-for-profit learning institutions and local service providers.

ITU: As managers of the project, ITU in cooperation with all its partners, selects the learning institutions that will host the Centres, coordinates their creation and helps in negotiating partnership agreements with relevant government agencies, the national telecom operator and the candidate institution. It also funds the training of two instructors for each institution selected (tuition fees, travel, lodging and boarding costs).

Government: To ensure the successful implementation of the Training Centre, a High-Level Facilitator is mandated to provide appropriate support for ITCI and to champion the cause of the ICTs in the country by mobilizing any local resource needed for the creation of the Centre.

Candidate institutions: Learning institutions interested in becoming an Internet Training Centre can apply if 1) they are a non-profit educational institution open to the public (university, training centre, technical institute etc); 2) they are strongly motivated and able to deliver on strict deadlines and 3) they can demonstrate their ability to implement the Internet Training Centre Programme.

"The overriding objective of ITU's Internet Training Centres Initiative is to ensure that growth in IP networking delivers maximum benefits to the global community. It is part of a global partnership drive with public and private sector organizations which creates a win-win opportunity for all stakeholders".

Hamadoun Touré

Director

ITU Telecommunication Development Bureau (BDT)

Cisco Systems, Inc: Cisco Systems makes available the entire curriculum of the *Cisco Networking Academy Program* to each Internet Training Centre. The *Networking Academy Program* delivers web-based multimedia rich educational content to students and working adults worldwide on the principles and practice of designing, building and maintaining computer networks. This includes online testing, student performance tracking, hands-on labs, and instructor training and support. The Cisco laboratory equipment used for the *Networking Academy Program* is provided at no cost to the selected Training Centre.

Cisco Networking Academy Program: World-Class Quality and Methodology

The *Cisco Networking Academy Program* is a not-for-profit education initiative developed by Cisco Systems in alliance with governments, education institutions, leading technology companies, and non-profit organizations around the world. The comprehensive *Cisco Networking Academy Program* includes:

- 560 hours of multimedia instructions
- on-line testing
- student performance tracking
- hands-on laboratory exercises
- instructor training and
- online technical support

To ensure the *Academy Program*'s vitality and success, Cisco has created an educational environment designed to open opportunities worldwide and give a 360-degree view of networking and Internet technology. This is achieved by the many alliances Cisco has built with various IT industry leaders. Educators can be confident that the *Academy Program* delivers a serious, comprehensive and independent curriculum by encompassing Cisco's partners, tools, products and solutions.

ITU Internet Training Centres that implement the *Cisco Networking Academy Program* can have access to its sponsored curriculum which incorporate new curriculum modules on Java, Unix, voice and data cabling, and IT essentials (PC Hardware and Software as well as Network Operating Systems). The whole curriculum offering under the *Cisco Networking Academy Program* delivers the range of services and support needed to grow tomorrow's Internet-savvy global workforce.

The *Networking Academy Program* embraces the spirit of learning in the Internet economy. It is a win-win situation for all stakeholders involved.

Enhancing Employability

Students are provided with relevant IT skills, and hands-on experience which prepares them for industry-recognized professional certifications such as the Cisco Certified Network Associate (CCNA™) and the Cisco Certified Network Professional (CCNP ™). Sponsored curriculum modules also prepare students for other well-recognized certifications including Sun Certified Programmer for Java™ 2 Platform, BICSI Registered Certified Installer Level 1 exam, A+ and Network+ administered by CompTIA. These certifications are a global passport for students to work anywhere in the world. In addition, participation in this Programme builds life-long learning skills, which are critical to the success of every graduate in the future.

"Cisco is committed to ensuring that today's students master the necessary skils for success in the Internet economy, in tandem with international organizations such as ITU"

Gordon Astles, President, Cisco Systems Asia-Pacific

Empowering Enterprise

Businesses are assured of a ready and continuous supply of highly skilled and qualified networking professional to drive their operations. As these talents are job-ready and immediately productive upon hiring, this can reduce Human Resources costs for enterprises.

Ensuring Competitiveness

APEC leaders acknowledged that through e-learning, economies can capitalize on Internet technologies to:

- enhance the skills of its people
- lower national unemployment rates
- bridge the social and economic skills gap
- reinforce the concept of lifelong learning
- and pave the way to swift progress for each nation and its people.

More information about the Networking Academy Program can be obtained at www.cisco.com/asiapac/academy or www.cisco.com/edu/academy_

How

Learning institutions wishing to become an ITU Internet Training Centre must have classrooms equipped with at least 20 PCs, LAN and internet connectivity (64 kbps dedicated line). They must also be committed to set up other Internet Training Centres at the local level and be prepared to assist them in their functioning. Special attention is given to learning institutions proposing female instructors for this programme.

Candidate institutions should submit a proposal indicating how they meet the entry requirements (infrastructure) and which government agency supports their application and is willing to nominate a High-Level Facilitator. Information on how to apply can be found at www.itu.int/ITU-D/hrd/itci/index.html.

«Going through the Cisco Networking Academy curriculum has been a life changing experience for me and a real eye-opener to what can be achieved with Internet technologies which I am really anxious to share with others for the development of communications in China»

Shirley Guo Lijun, Sophomore computer science student from the Nanjing University of Posts and Telecommunications.

«The Internet has really taken off in Samoa but unfortunately there are not a lot of opportunities for us to pick up the necessary skills. The Internet Training Centre has since filled this gap and giving young Samoans access to those skills»

Vavae Timothy Toma, Bachelor of Science student majoring in computing from the National University of Samoa.

ITU Internet Training Centres Initiative

ITCI at a glance

as at December 2002

Training Centres:	**26**	**Participating LDCs:**	**11**
Instructors trained:	**51**	**Students enrolled:**	**807**

Country	Location	Name of Internet Training Centre
AFRICA		
ANGOLA *	Luanda	Instituto Nacional das Telecomunicaçoês (ITEL)
CAPE VERDE *	Praia	Universidade Jean Piaget de Cabo Verde
MALAWI *	Lilongwe	Lilongwe Technical College
MALI *	Bamako	University of Mali
RWANDA *	Kigali	Kigali Institute of Science, Technology and Management
SENEGAL *	Dakar	ESMT
TANZANIA *	Dar-es-Salaam	Dar-es-Salaam Institute of Technology
MAURITANIA *	Nouakchott	Ecole Nationale d'Administration de Nouakchott
KENYA	Nairobi	African Advanced Level Telecom Institute (AFRALTI)
UGANDA *	Kampala	Makerere University, Dept. of Women and Gender Studies**
ZIMBABWE	Harare	University of Zimbabwe
ARAB STATES		
TUNISIA	Tunis	Ecole Supérieure des Communications de Tunis (Sup'Com)
ASIA PACIFIC		
CHINA	Nanjing	Nanjing University of Posts and Telecommunications
INDIA	Chennai	Anna University
INDIA	Kurukshetra	National Institute of Technology Kurukshetra
INDONESIA	Medan	State University of Medan
MALAYSIA	Kota Kinabalu	Universiti Malaysia Sabah
MALDIVES *	Malé	Maldives College of Higher Education
PHILIPPINES	Quezon City	National Computer Center
SAMOA *	Apia	National University of Samoa
LATIN AMERICA		
BRAZIL	Brasilia	University of Brasilia
ECUADOR	Guayaquil	Escuela Politécnica del Litoral (ESPOL)
HONDURAS	Tegucigalpa	Universidad Nacional Autónoma De Honduras (UNAH)
CENTRAL & EASTER EUROPE / CIS		
POLAND	Warsaw	Warsaw University of Technology
ROMANIA	Bucharest	University of Galati**
UKRAINE	Kiev	Head Training Centre of Ukrtelecom

* Denotes Least Developed Countries
** gender-focused project

Course Structure

The *Cisco Networking Academy Program* is a comprehensive eight-semester Core Programme with additional curriculum modules that teach students a broad range of valuable Internet technology skills. The Programme combines instructor-led online learning with hands-on lab exercises, online assessment, student performance tracking, instructor training and support, and preparation for industry standard certification.

Core Curriculum

- **CCNA – 4 Semesters / 280-hour course**
  CCNA 1 — Networking Basics
  CCNA 2 — Routers and Routing Basics
  CCNA 3 — Switching and Intermediate Routing
  CCNA 4 — WAN Technologies

- **CCNP – 4 Semesters / 280-hour course**
  CCNP 1 — Advanced Routing
  CCNP 2 — Remote Access
  CCNP 3 — Multi-layer Switching
  CCNP 4 — Troubleshooting

Sponsored curriculum

- Fundamentals of UNIX — 70-hour module
- Fundamentals of Java Programming — 70-hour module
- Fundamentals of Voice and Data Cabling — 70-hour module
- IT Essentials I: PC Software and Hardware — 70-hour module
- IT Essentials II: Network Operating Systems — 70-hour module

Certifications

- The Programme prepares students for industry certification — Cisco Certified Network Associate (CCNA) and Cisco Certified Network Professional (CCNP), which ensures high standards of technical expertise
- The sponsored curriculum modules prepare students for other well recognized Industry certifications such as the Sun Certified Programmer for JavaTM 2 Platform; BICSI Registered Certified Installer, Level 1 exam and CompTIA's A+ and Network + certifications
- Cisco certification achieved at any level means joining the ranks of skilled network professionals who have earned recognition and respect in the industry.

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