

Nordics & Baltics Networking Academy Conference

# New NetAcad Courses: Opening doors

Stockholm 2015

Jutta Jerlich May 2015

### Continuing Innovation in Teaching and Learning

#### Cisco Developed

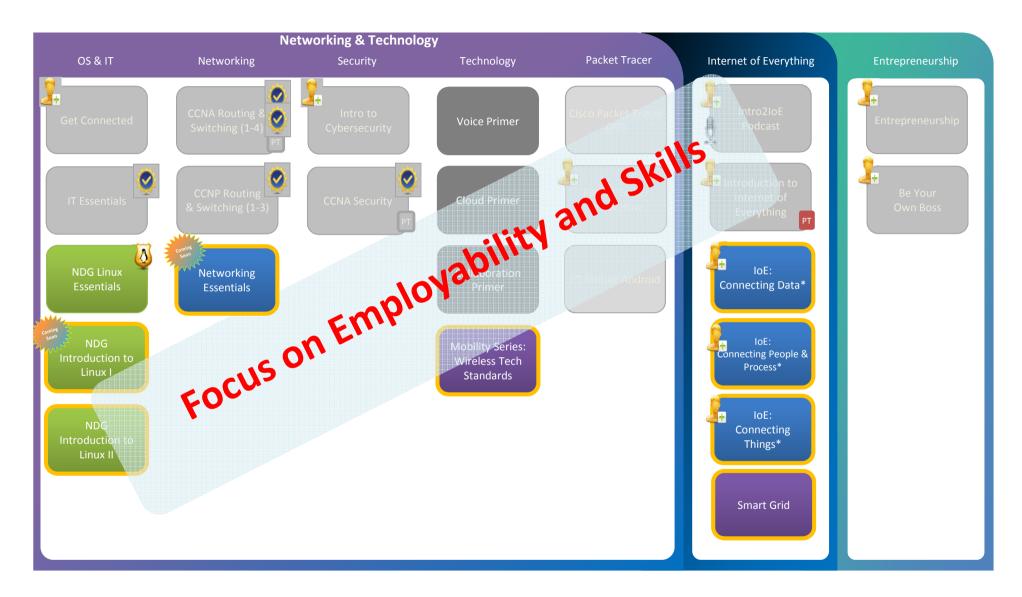
- Instructor-led, core NetAcad ICT courses offered in partnership with schools and organizations around the world
- Self-enroll courses are self-paced, self-directed courses designed to complement our core offerings

# Community Developed

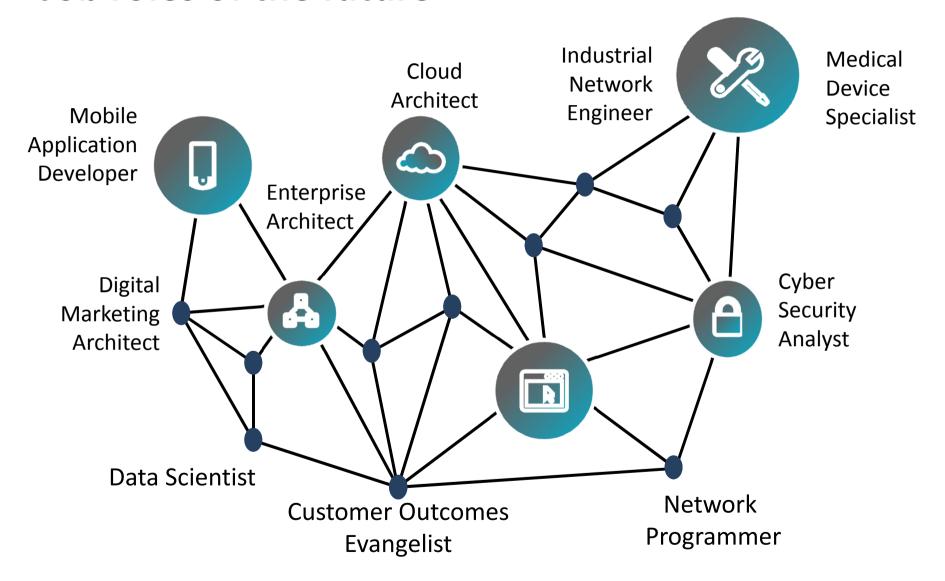
- · Learning materials developed by NetAcad instructors partnering with Cisco
- Shared with the entire global NetAcad community to provide a way for instructors to expose students to some essential and emerging technology topics
- All instructors can open/teach classes using this supplemental content

# Partner Developed

- Relevant content developed by a third party that aligns with our desire to increase employability
- Enables faster time to market
- Expands learning opportunities for our students with additional technology and soft skills courses



### Job roles of the future



### Coming technologies require new & evolving skills

### **Technical Skills**

- Cloud
- Cyber Security
- Big Data
- Software-defined Networking
- Internet of Things
- Business transformation



# 21st Century Skills

- Critical thinking
- Collaboration
- Communication
- Creativity
- Problem-solving
- ITC Proficiency

Networked **connection** of people, process, data, things

### **Linux Essentials**

#### **DESCRIPTION**

- Curriculum developed by Network Development Group (NDG)
- Instructor-led online curriculum
- 16 content modules
- Aligns with Linux Professional Institute (LPI) Linux Essentials Certificate

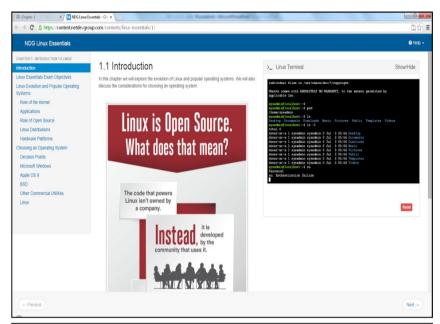
#### **FEATURES**

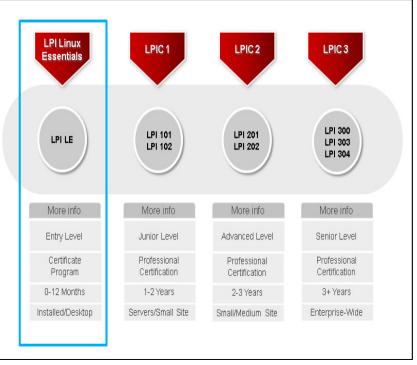
- Include practice lab activities and assessments to test understanding
- · Virtual machine throughout the course
- Estimated time to complete: 70 hours
- 20% discount on LE certificate

#### TARGET AUDIENCE

- · Targeted to entry-level Linux professionals
- · No previous knowledge required

- Language: English
- Instructor-led





# Introduction to Cybersecurity

#### **DESCRIPTION**

- Introduces the importance of cybersecurity and current trends in industry
- Content organized in 8 modules that include presentations and panel discussions with industry experts

#### **FEATURES**

- Activities, videos and additional resources for students to explore
- Assessments include a pre-test, 8 quizzes, 1 final exam
- Students can self-enroll
- Estimated time to complete: 20 hours

#### TARGET AUDIENCE

- Introductory course for students interested in and introduction to cybersecurity and learning about the trends of cybersecurity in the market today
- · No previous knowledge required

- Currently available in English
- · Self-enroll and instructor-led



# Introduction to the Internet of Everything

#### **DESCRIPTION**

- Introduces the concepts and challenges of the transformational IoE economy
- Broad focus, not aligned to an industry vertical or certification

#### **FEATURES**

- Five modules of interactive instructional content featuring IoE experts
- · Activities, videos, and simulation experiences
- · Assessments include a pre-test, module quizzes, and final exam
- · Class duration: 6 weeks
- Estimated time to complete: 15-20 hours
- · No prerequisites

#### **TARGET AUDIENCE**

- Self-directed learners who want to understand what IoE means for them
- Self-directed learners who want to leverage their technical knowledge into IOE-related functions in the workplace

- Available: English, French, Spanish, Simp. Chinese, Br. Portuguese, Japanese, Korean, Russian.
- · Self-enroll and instructor-led



Podcast Series: Internet of Everything

#### Series Overview

This podcast series provides an introduction to the future of the Internet, where a network foundation connects billions of things and trillions of gigabytes of data, enhancing our decision making and daily interactions.

It can be used to prepare for the Introduction to the Internet of Everything course.

**Prerequisites**: None **Languages**: English

Delivery Method: mp3 files

Estimated Time to Complete: 2.5 hours

**Recommended Next Course**: Introduction to the

Internet of Everything



Anyone seeking to develop a broad understanding of trends, technologies, and career opportunities in the Internet of Everything.





### **Learning Components**

- 5 modules featuring a panel of IoE experts
- Links to related resources
- Downloadable mp3 files

# Entrepreneurship

#### **DESCRIPTION**

- Helps students develop an entrepreneurial mindset
- Teaches skills such as business planning, negotiation, financial literacy, and problem solving
- Content organized into 7 modules that include practice activities and guizzes to test understanding

#### **FEATURES**

- Students can self-enroll, or instructors can teach this course in their classrooms
- Estimated time to complete: 10-15 hours

#### TARGET AUDIENCE

For students who want an introduction to an entrepreneurial mindset and business skills

- · Currently available in English, Arabic, Chinese and Spanish
- · Self-enroll and instructor led



### Be Your Own Boss Technopreneur Series

#### **DESCRIPTION**

- Provides tips and advice to launch a successful tech business
- Technopreneurs share lessons learned and success stories
- Complements the NetAcad Entrepreneurship course

#### **FEATURES**

- Eight 1-hr video recordings of instructional content (15 mins) and experience-sharing (45mins) for each module
- 1 quiz and 1 survey per module
- Estimated time to complete: 1 hour/module, 8 hours for series

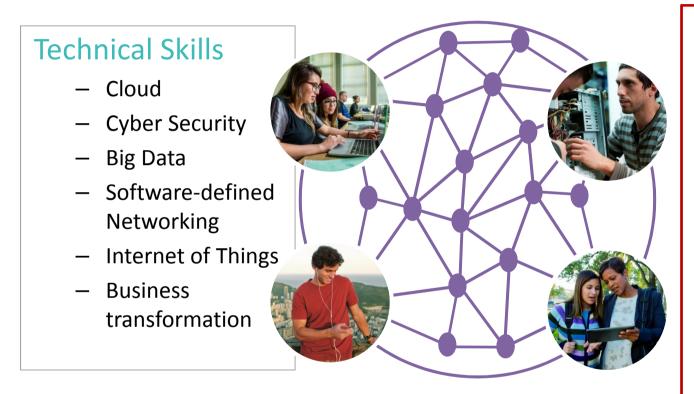
#### TARGET AUDIENCE

- Students interested in owning their own tech businesses
- · Entrepreneurship course students seeking insights and advice
- · No previous knowledge required

- Language: English
- · Self-enroll course in Cisco NetSpace
- 4 modules now available



### Coming technologies require new and evolving skills



# 21st Century Skills

- Critical thinking
- Collaboration
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- Creativity
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- ITC Proficiency

Networked **connection** of people, process, data, things

# Knowledge disappears

as soon as you have acquired it.

#### Have you noticed this as well?

Wanting to learn something may seem like a long way to go and a huge task.

After you are done, finished the exam, it seems to have become part of you and is not so visible any more.

Only when you start applying the knowledge in practice, using the knowledge in daily life and at work in a hands-on project ...

Behavioral economist **Dan Ariely** calls it

#### The curse of knowledge

When we know something and know it well and have practiced it, it is hard to recognize this knowledge inside yourself. It is also hard to communicate it to other to make them understand..

We sometimes forget that it is only practice and experience that made us to who we are today.

# Create an exciting menu

### Ingredients:

Technical knowledge

• Business knowledge

• Project Management

Languages

Soft skills

Team settings

Carefully mix technical knowledge and further skills based on the professional requirement of the industry

Set the time frame Let the experience begin

Celebrate results
Use mentoring and coaching



# New formats of teaching & learning

- Project based learning
- Problem based learning
- Idea Workshops
  - from ideas to prototypes
- Competitions
- Real life projects
- Technology in Action
- ...



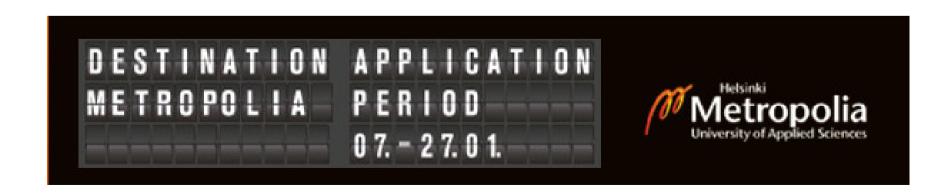


>>> some ideas and examples

### **Project based Courses**

### Team Teaching

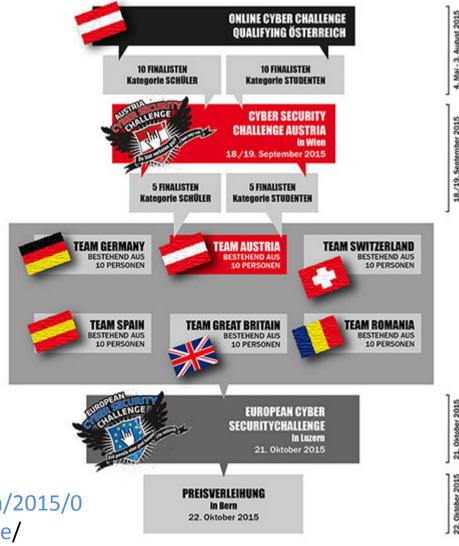
Dropout rates of 45% lead to the redesign of several study programs which are now offered as a project based curriculum with 5 teachers and subjects taught in combination.



# European Cyber Security Challenge

Most countries lack sufficient IT security professionals to protect their IT infrastructure. To help mitigate this problem, many of them setup national cyber security competitions for finding young cyber talents and for encouraging them to pursue a career in cyber security.

The European Cyber Security Challenge leverages these competitions with a pan European layer



https://netacadeurope.wordpress.com/2015/0 5/20/european-cybersecurity-challenge/

# **Technology Orientation Courses**

### IT Essentials 5.0

- Aligned to CompTIA A+ industry certification
- Translated by Cisco and the community to many languages
- Recommended duration: 70 hours

### combined with

- Entrepreneurship
- IoE
- Cybersecurity
- Linux Essentials



Used at Girls Days, introduction to next incoming students

### Curriculum used in new ways

### IT Essentials Course for teachers at Thorildsplans Gymnasium

Parts of the IT Essentials Curriculum can be taught in different subjects: English Language, Physics, Mathematics, Electronics.





Networking Akademien Blog

https://netacadeurope.wordpress.com/2015/02/05/crossing-borders/

### Hackathons

48 hours for an interdisciplinary group of designers, engineers and programmers accepting the challenge to build an IoE based solution. Along with expert check-ins focusing on hardware, software, programming, business modelling and collaboration the teams are coached from the ideation phase to the prototyping and idea pitching.



**ToThem** would like to help guide you when you like to learn something new

**Edumotion** aims to understand student's feelings, moods and emotions to help solve problems

**Black Cat Analytics** improves presentations thanks to real (and soon, big) data.

https://netacadeurope.wordpress.com/2015/02/02/hackathon-passion Milan



### Pitching ideas

Creathon: 48 hours of intense work from an idea to a prototype open to all **students from all background** with all types of competences.

Event stimulating creativity and innovation, using new tools and methods, fostering and fueling creativity in everybody (organizers, helpers, partners and jury included) involved.

Students work in teams and come up with ideas about the **innovative use of technology**. The event last 1,5 days. The end of the competition was a 5 minute pitch explaining their projects aiming to convince jury members that their idea is the best.



https://netacadeurope.wordpress.com/2015/03/24/idea-pitching/

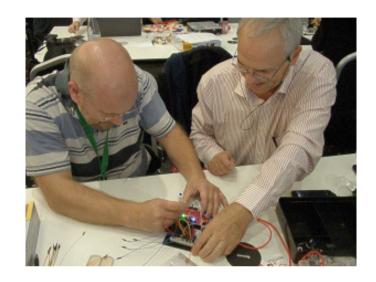
#### **Continued Education for teachers**

### **Build your smart device**

... without learning a programming language.

Teaching in a different way requires one to experience how to learn in a different way:

The workshop "Be Creative with IoE: building a smart thing"



Learning in teams – here are the team roles:

Manager – ensures the projects are implemented and that everybody is working

**Designer** – design and construct the box

**Programmer** – programs the software inside the boards

Engineer – connect the Raspberry Pi and the Arduino, peripherals of I/O, wires

https://netacadeurope.wordpress.com/?s=Build+your+smart+device

### Involving stakeholders from along the value chain

**Workshop** in groups discussing IoE ideas – the most often mentioned ideas circled around solutions for the traffic in Stockholm.

It was inspiring to see how young Networking Academy students took this opportunity to **present their ideas in front of the auditorium.** It was a great experience for all to be part of this connection formed between all participants and the Cisco Partners involved.



#### Thanks to

... > 70 Students from KTH, Chalmers, Iftac, Halmstadt University, Mälardalen University and others

... Cisco Sweden team and partenrs **Atea AB, TDC Sveriga AB, Cygate AB, Network** services and **Commsec** 

https://netacadeurope.wordpress.com/2015/02/05/talent-connection

# Allow the learning outcome

### .... to be personal and different for everyone

Working in teams, communication in a global world, dealing with problems, applying your knowledge in a complex environment needs strategy, the power of observation, the passion for what you do and the feeling for people at the same time.

Learning takes a different shape for each person.

How cool it is to find a special twist to IT Networking from Nathan Boone

How a team can make you have the courage from Maximilian Lehrbaum

How a moving finish line still creates only winners from Felix Hartung

How it feels to work in 200% enthusiastic team from Kevin Van Ryckegem

How mutual respect kickstarts team work from Ivica Vugrinec

Wings for Life WorldRun @http://netacadeurope.wordpress.com

# Competitions - Challenges



International Competitions from Cisco NetRiders WorldSkills National Skills

Run a semester long competition

### **THANK YOU**

Questions?

Ideas?

Projects / Initiatives to share ?

