Reunión Plenaria ESVI-AL

Informe de Actividades – Helsinki Metropolia University of Applied Sciences

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Universidad de Alcalá, 23 al 27 de abril 2012

Proyecto cofinanciado por la UE

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- Resolución de dudas y conversatorio con participantes (5 minutos)

Presentación de Universidad/Institución

- Helsinki Metropolia University of Applied Sciences (http://www.metropolia.fi)
- 16 000 students most at Bachelor level (4 years),few at Masters level (1 year)
- 4 fields of study
  - Culture (2500 students)
  - Business and Administration (2000 students)
  - Health Care and Social Services (4000 students)
  - Technology and Transport (engineering) (7500 students)
    - School of ICT 2750 students
    - School of Industrial engineering 2750
    - School of civil engineering 2000
- Professors 800
- Staff 400
- Locations in 3 cities: Helsinki, Espoo and Vantaa in Finland, 21 addresses

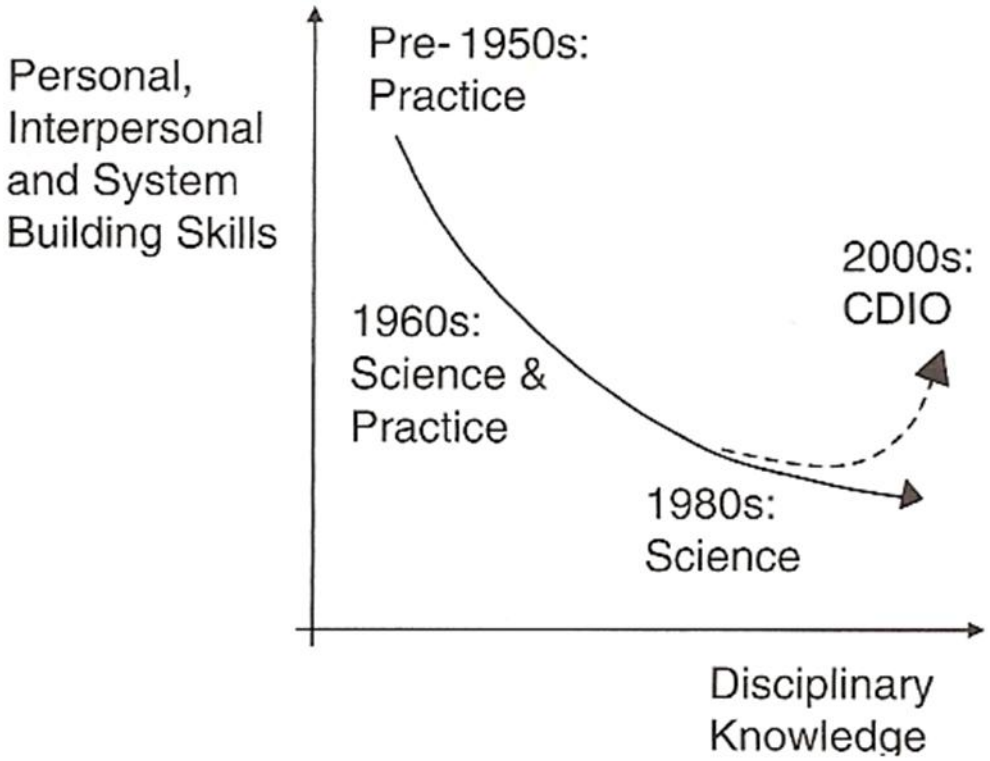
Helsinki Metropolia University of Applied Sciences

- Bachelor's Degree Programmes conducted in English in the Field of Technology and Transport
  - Information Technology (since 1992)
    - Specialisation options:
      - Software Engineering
      - Embedded Systems
      - Computer Networks
      - Telecommunications
  - Media Engineering (since 1996
  - Environmental Engineering (since 2008)
  - Electronics (since 2010)
  - Information Technology (evening classes in 2010)

Helsinki Metropolia University of Applied Sciences

- Curriculum Development Principles
  - Consistent with the requirements from
    - ECTS (European Credit Transfer System)
    - FEANI (European Federation of Engineering National Associations)
    - TES (collective labour agreement)
    - CDIO Standard (new pedagogical approach) (www.cdio.org)
- Project based learning concept introduced
- Integrated curriculum
- Module based curriculum
- Innovation platforms
- Extension of study year up to 40 weeks (32 weeks before)
- Applied to all engineering programmes

Evolution of Engineering Education



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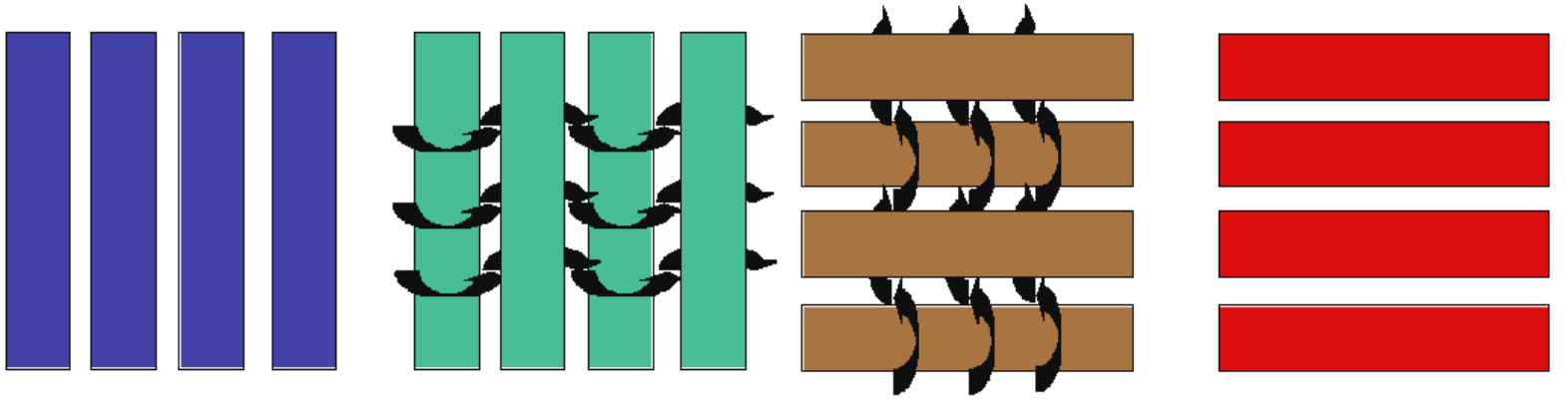
Alternative Curriculum Structures



A strict disciplinary curriculum
Organized around disciplines, with no explicit introductions or skills

A CDIO based curriculum
Organized around disciplines, but with skills and projects interwoven

A Problem Based curriculum
Organized around problems, but with disciplines interwoven

An apprenticeship model
Based on projects, with no organized introductions of disciplines

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Systematic Integration

cdio

Development routes (schematic)				
Year 1	Introductory course	Physics	Mathematics I	
	Mechanics I	Mathematics II	Numerical Methods	
Year 2	Mechanics II	Solid Mechanics	Product development	
	Thermodynamics	Mathematics III	Fluid mechanics	Sound and Vibrations
Year 3	Control Theory	Electrical Eng.	Statistics	Signal analysis
	Oral communication	Written communication	Project management	Teamwork

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CDIO project in Sound and Vibrations course

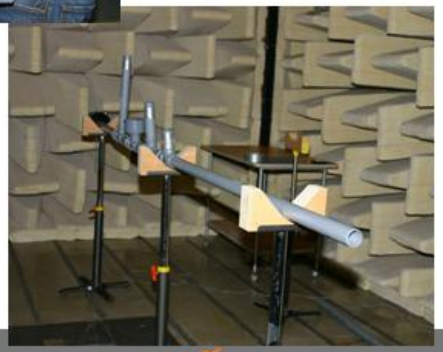
Design of a silencer – 100 students

Conceive

Implement

Design

Operate



Metropolia

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Visit YouTube to see more

- **Robot Wars**

  http://www.youtube.com/watch?v=Sf3nblsmw6c

- **International day**

  http://www.youtube.com/watch?v=ox-tJ2oXFJI

- **3D REEL 08**

  http://www.youtube.com/watch?v=CJFLfb8ug5E&feature=related

- **E-RA ice speed record**

  http://www.youtube.com/watch?v=OsqTltpP52w&feature=player_embedded#!

Interés y Motivación de participación en ESVI-AL

- **Experiencia en proyectos previos**
  - **Finnish Online University of Applied Sciences (http://www.amk.fi)**
  - 200 course offerings offered by UAS's in Finland. Accessible to all UAS students in Finland
  - Management and arrangements common to all UAS students
  - **NetPro project**
    - Design, develop and disseminate network based project learning approaches in engineering education.
    - NetPro I: 12/97 - 12/00
    - NetPro II: 12/00 - 02/04
    - 11 partners from five EU countries (FI, FR, UK, I, BG)
  - **Knowledge Practices Laboratory KP-Lab**
    - Knowledge Practices Laboratory KP-Lab focuses on studying learning practices in professional and educational environments and developing tools to support innovative practices of sharing, creating and working with knowledge.
    - Duration: 1.2.2006 - 31.1.2011, 25 partners
      Co-funding: EU 6. Framework Programme, IST-programme/Technology Enhanced Learning
  - **Enhancing teaching and learning experiences**
    - Asia IT&C (Malesia, Thailand, Germany, Spain, Finland)
    - EU – Canada
    - Erasmus IP projects inside EU
  - **Save Energy, Smart Campus, RFIDLab, GreenNetFinland, eCar etc…**

Participación en actividades en el primer semestre

- Evaluation of accessibility of seven university web sites in Finland
- Presentation of the results at CAFVIR 2012
- Evaluation questionnaires of accessibility at Metropolia by students, teachers, staff, and management
- Matriz de actividades en las que se participa
- Avances/Obstáculos

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Resolución de dudas y conversatorio con participantes