Introduction to LCA Seminar for engineering students

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French « Grande Ecole », one of the leading Textile Master degree in Europe
Introduction to LCA Seminar for engineering students

Semester 6: Sensibilisation to Sustainable Development in Textile:
- 2 days Seminar (16 hours)
- 90 students: 3 groups of 30 students
  - 3 teachers at the same time
  - 15 groups of 6 students
- 3 sessions

S1. 4 hours: LCA
- Introduction
- Group workshop
  - T-Shirt Life Cycle
  - Energy Consumption
  - CO2 emission

S2. 6 hours: parallel lessons
- LCA of the T-Shirt using simplified LCA software
- Social aspects in textile: social audits
- Sustainability Regulations of textile

S3. 6 hours: eco-design
- Group workshop
  - Labels in eco-textiles
- Eco-design Strategies Presentation
- Group workshop
  - Design of a new T-Shirt
S1. Introduction to LCA of a red T-Shirt

S1. 4 hours: LCA

- Introduction
- Groups of 6 students

✓ Life Cycle description: from cradle to gate – from cradle to grave

✓ Energy Consumption

✓ Carbon Footprint

→ Hypothesis / Uncertainties
→ Questions about the Functional Unit
→ Slow fashion / fast fashion: how to take into account the durability?
S2. Simplified LCA of a red T-Shirt

S2. 6 hours: parallel lessons (2 hours)

- LCA of the T-Shirt using simplified LCA software
- Social aspects in textile: social audits
- Sustainability Regulations of textile

- Hot spots of the Life cycle related to Impact categories
- Why? (Textile knowledge)

EIME (CODDE Bureau Veritas)
SPIN’IT (CYCLECO)
S3.Eco-design of a new T-Shirt

S3. 6 hours : eco-design of a T-Shirt

✓ Labels in eco-textiles
Each group (6 students) select a label – search for informations – 3 ‘presentation

☐ Eco-design Strategies Presentation → ecodesign Wheel

✓ Design of a new T-Shirt (group workshop)
  → A better T-Shirt for the environment :
  with the Same Functional Unit
  → ecodesign strategy
  → comparative LCA
  → interpretation
  → 5 minutes presentation
conclusions

• Group workshop on Sustainable textiles
  – Aware of the environmental/social potential impacts of fashion
  – Understand LCA
    • Basic knowledge for using LCA software
    • Able to participate to an ecodesign group
  – Use of their technological textile knowledge
  – More active students
  – Collective work : exchanges between teachers