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ENVIRONMENTALLY-FRIENDLY MATERIALS AND CHEMICALS
Working in harmony with nature

Introduction:

The increased interest in waste management and total life cycle analysis lead to the research and development of environmentally-friendly technologies and materials. It not only urges research for the recycling of material waste, but also for the use of more environmentally friendly components in any product.

In this frame, making common people more conscious and more active regarding the materials and chemicals that affect human life is an important aim and the course follows up this problem.

Goals:

- to provide a minimal information about the impact of the materials and chemicals on the human life
- to offer a minimal information about the main materials and chemicals that can affect human life
- to determine an environmentally responsible attitude of the people about green products
- to implement environmental conservation measures

Target groups:

- Unemployed
- Low wage employed
- Students and teachers (as they can disseminate properly the learned ideas)

List of subjects/content of the course :

The course will contain:

1. Introduction
2. Module 1: Modern materials and chemicals used by common people

- *materials*:
  - modern building materials
  - materials included in the structure of the home appliances (plastic, metal, composite materials)
  - clothing materials;
  - packaging materials
- *chemicals*
  - chemicals in food
  - chemicals in medicines
  - chemicals for the home use (cleaning and hygiene articles, detergents, insecticides)
  - cosmetics
  - chemicals for gardening (fertilizers, insecticides, pesticides)
  - chemicals in household refuse

3. Module 2: Modern home materials and chemicals – benefits and negative potential

Positive and negative impact of the materials and chemicals, at present and for the future, on the human life and environment.

4. Module 3: Alternative materials and chemicals – eco-friendly materials and chemicals

The main categories of environmentally-friendly materials and chemicals

5. Module 4: What can we do?

Developing an environmentally responsible attitude and implementing environmental conservation measures

6. Conclusions

Duration:

Course within a „Summer School" session. (1 week/ 3 - 5 days/4 hours per day).

Training methods:

By the criterion of the main source of the learning, one can find some categories of educational methods:

1. communicative methods: oral communication (account, description, conversation, dialogue), writing communication, visual communication.
2. exploring methods (observation, direct exploration, modelling, problem-solving)
3. practical action – methods (direct action, simulation)

A special attention must be accorded to the group-work methods, which are specific to the adult education. In that category are instance study, brain storming, role acting, educational games, etc.

A good method is the small-group discussion in tutorials, which can be used for training the subjects that then to disseminate the learned ideas.

References:

www.eeeee.net
www.worldwatch.org
www.ntu.edu.sg/mpe/research/programmes/Product_Design