The Environmental Education in the Technical University of Gabrovo, Bulgaria - the Right Path to the Way of Eurointegration

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Abstract

The Environmental Education is an essential element of the modern systems for training professionals not only in Europe but in the world wide, as well as this kind of education has an essential value for the countries facing the process of joining the European Union, as Bulgaria is.

Bulgarian Environmental Education is performed at the Higher Education Law and according to the State Requirements for Accreditation of the specialty “Ecology and Environmental Protection”. It is performed at Bachelor’s degree mainly, and at Master’s degree at few universities only. All of the Master’s degree curriculums are developed roughly in accordance with the general scientific and training fields of the relevant university. If the university is chemically profiled, then its Master’s curriculum has chemical direction, for instance.

Through the present contribution, authors share their experience in developing and deploying Master’s degree curriculum in the specialty “Ecology and Environmental Protection” bearing more specific accent – Master’s degree training of people who will be charged as ongoing or top managers in the area of Ecology and Environmental Protection in different sectors of the industry and public administration.

The education on Ecology and Environmental Protection is completed in two degrees at the Technical University of Gabrovo. The first one – Bachelor’s, has prolongation of four years. It includes three groups of educational disciplines. First group includes disciplines on fundamental sciences: mathematics, informatics, physics, common and analytic chemistry, fluid’s mechanic, intensive language training, etc. Training on the ecological problems includes the following disciplines: ecology, climatology, biochemistry, pollution of the air, the waters and the grounds, the influence of the pollution on the ecosystems etc. The stress of Bachelor’s degree lays on third group of disciplines which are connected with the protection of the environment, namely: biochemical, microbiological and biophysical methods of purification, physical and chemical methods for purification fluids, technologies for solid waste treatment, monitoring

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of the environment, environmental management systems (ISO 14000), Ecological legislation and norms etc. The education completes with a state final certification examination. The educated bachelor is ready to work as a specialist in the field of ecology at companies, SMEs or public administration, as a teaching staff's member at the schools, etc.

The bachelors have the possibility to continue their education in the higher, Master's degree. The stress of this degree lays on the obtaining top managing abilities in the areas of the Environmental Protection, Environmental Management Systems and Integrated Management Systems. This purpose is achieved through expert training in the next directions, as follows:

-Cleaner Production on the basis of the Best Available Techniques (BAT). It aims at enabling graduates to implement successful the Integrated Pollution Prevention Control (IPPC) inside the organizations they will be employed in after their graduation;

-Quality Management Systems. This training is performed by certified auditors of the European Organization for Quality;

-Safety Management. The accent is on the European directives requiring a mark for conformity with the requirements for safety of products and services;

- Waste Management. Here the accent is on the utilization of the wastes with industrial origin, converting them in useful products. The bioremediation of old landfills and treatment of hazardous wastes are other main topic;

-Information Systems and Computer Literacy. Within this course, trainees acquire all of the necessary skill in using the Internet-enabled kinds of information proceeding and exchange as well as basic skills in the text processing, electronic spreadsheets, etc.;

-Eco-marking of products and services through their lifecycle;

-Sustainable Development and Ecosystems.

The practical classes and case-studies are essential part of the education during the training in the above directions. They are performed as a team work through using modern methods and approaches as Brainstorming, Benchmarking, Cause and Effect (Ishikava's) Diagram, Quality Function Deployment, Transactional Analysis of the Verbal Communication etc. The Master's degree completes with defence of a diploma work.