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# Evaluation of study course concepts

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# Structure of Presentation

- Evaluation criteria: according to the ECOBRU tasks, environmental science and education principles
- Evaluation structured according to the main issues in the course concepts (main part of presentation)
- General conclusions

# Evaluation criteria

Course concepts should be elaborated:

- for qualification development – professional competence of teachers/ tutors (schools, colleges, universities);
- for learning AND application of knowledge, skills, competences in practice;
- for further implementation in education institutions;

# Evaluation criteria

Course concepts should include all course description issues:

- aims, tasks;
- target groups – specified;
- content;
- results / learning outcomes (knowledge, skills, competences);
- methodology issues – according to tasks and content (!);
- control forms.

# Evaluation criteria: content issues

## **Environmental science based:**

- sustainable development perspective;
  - interdisciplinarity (not mono) approach  
(nature, economic and social issues);
  - environmental protection,
  - environmental policy/ legislation,
  - environmental technologies and production,
  - nature resources management,
  - environmental awareness and behaviour
- oriented issues according to  
environmental science development;

# Evaluation criteria: content issues

**Environmental education/ environmental pedagogy based** – comprehensive frame of methodology according to tasks, content, target group;

**Environmental problems and solutions oriented** - link with current issues;

**Professional competences in various sectors;**

# Evaluation criteria: formal quality issues

## **Logics and mutual conformity**

(between tasks, content, methodology)

## **Language and translation issues**

## **Completeness, readiness**

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Evaluation of study courses:  
structured according  
to the course concept issues



# Evaluation of study courses: content

## **Interdisciplinary approach:**

Most courses lack wide enough and complex view (**interdisciplinarity**) on current problems and solutions – economic and social aspects are not taken into account.

Besides, there is a number of advanced courses, where interdisciplinarity approach is used sufficiently, problems are addressed through different perspectives.

# Evaluation of study courses: content

There are courses, where the content is too **formal** (not reflecting the essence); here might be the risk that:

- the course content does not correspond to the set aims and there will be difficulties to apply competences in practice;
- content does not fit with the professional needs, environmental competence.

# Evaluation of study courses: content

Important is the **balance** between the Environmental science/ ecology theory and applied, professional aspects.

Inadequate (in the case of ECOBRU project) are courses with both extremes. Good study course includes both:

-environmental science/ ecology based principles, frame, as well as

-practice oriented measures, management instruments, technologies.

It is important to keep in mind, that these principles and applied instruments are developing in time: economic development, environmental policy/ legislation, technology and ecoinnovations development – the role of current literature resources!!

# Evaluation of study courses: content

Sometimes courses:

- are **too much** focused on the **professional aspects** according to the legislation requirements – its a kind of one extreme.

- are **not** fully **reflecting the sustainable development** basic principles regarding attitudes, consumption issues and values (especially for environmental awareness oriented courses).

# Evaluation of study courses: content

There is a number of study courses, where the content is **overloaded**.

We can understand the wish of course authors to include “all relevant” topics, but unfortunately as a result we get courses, where their **successful** practical implementation is not possible.

The major part of courses should be reviewed regarding their content volume. Priority for a certain course topics should be specified or the course duration should be changed accordingly.

# Evaluation of study courses: content

Insufficiently comprehensive content from the **environmental science development, interdisciplinarity**, etc. point of view, where we should consider integration of certain principal topics (providing wider and more comprehensive look), see further examples.

An example: do not narrowly focus only on bioindications, but rather on **environmental monitoring** thus bringing in much broader perspective and practical application.

# Evaluation of study courses: content

An example : it is important to introduce and explain the role of **life cycles and ecodesign**, **ecoinnovations**, **industrial ecology** issues and ideology «from the cradle to the cradle» into the economy/ industry development oriented courses.

An example : it is important to introduce and explain the role of **environmental technologies** (principles and hierarchy) and **cleaner production** for environmentally sound production / industry development oriented courses.

# Evaluation of study courses: content

An example : it is important to introduce and explain the role of **ecosystem services**, ecosystem stability and impacts on different ecosystems for the nature resources protection oriented courses.

An example : it is important to address the **traffic as part of the sustainable infrastructure** (links with nature, economy, social issues) and to show various traffic development alternatives and trends (future perspective).



# Evaluation of study courses: content

An example : it is important to introduce the **EIA principles**, main steps of EIA, EIA benefits and good EIA practice examples in EIA related courses.

In some cases the course content **is targeted at students, but not at teachers/ tutors**, who should learn how to implement the study course (according to the course aims). For example, adaptation to the teachers' target group should be considered for some of LSTU and PSTU courses.

# Evaluation of study courses: content

**Course content does not correspond to the course title and tasks.**

That happens, when the course authors try «to add» new aims to the old study courses.

## Evaluation of study courses: content

Formal, narrow, environmental science not based content as a result of poor **Literature sources** regarding the necessary topics, as well as outdated resources (older than 2005, even 1995!!).

Some courses are too much focused on the legal acts.

## Evaluation of study courses: content

There is a strong relationship: the most advanced/comprehensive courses are courses with rich, wide and present-day Literature sources!!

There are rather significant differences between the project partners. Most advanced Literature sources are used by

NTU, CHNU, VSPNU (UA),  
MSTU, RSUCE, NCTC (RU).

This might be a rather good development potential for other universities, because it is likely, that these books (in Russian) are available for all universities.

# Evaluation of study courses: content

## **Course title**

Sometimes course titles look like «draft titles»- they are:

- too long or
- not corresponding to the content or
- are poorly translated.

For example, the title «Assessing the impact on the environment: roads, structures, enterprises for construction and maintenance works»

might be replaced by «Environmental aspects in the road construction sector».

# Evaluation of study courses: methodology

Some universities are not enough focusing on **necessary teaching methods and the control forms of** participants in order to achieve the course aims – gain certain knowledge and develop certain competences.

This relates to interactive discussions, role games, brain storms, case studies, as well as elaboration of course assignments, different sets of recommendations.

# Evaluation of study courses: methodology

Many universities have designed courses with well-considered methodology, demonstrating an advanced competence in environmental pedagogy.

We can mention here:

NTU, CHNU, VSPNU, NAPN (UA),  
MSTU, RSUCE (RU), ISEU (BY)

## . Evaluation of study courses: methodology

It is very important to design **comprehensive and appropriate package of course control forms**, which are professionally based and well specified.

There are courses with very traditional «copy-paste» control forms. But we should consider appropriate forms instead: some universities use course assignments (though small format).



# Evaluation of study courses: methodology

Good **course results / learning outcomes** make sure, that course goals will be achieved and developed competences will be applied.

Some universities are very advanced creating appropriate learning outcomes, as an example:

Learn.....; Reproduce methods of .....

Identify processes .....; Classify elements of.....;

Compare cases...; Apply instruments...;

Make clear the system.....; Explain.....; Demonstrate.....;

## .Evaluation of study courses: methodology

There is a lack of group work discussions related to «**good examples**» and «**real cases**»; discussions on real cases/ case studies;

That relates mainly to the courses on economic development, road construction, traffic, specific environmental problems in regions,etc.

# Evaluation of study courses: methodology

Course authors should consider how the designed **methodology fits with certain target group** in school, university, enterprise and how it actually works.

Besides, there are some courses, where the methodology part is **not elaborated at all** or not complete!

# General conclusions

Some ECOBRU project partners have so far developed advanced and excellent study course concepts:

- according to the project aims,
- according to environmental science principles and
- applied professional requirements and
- use appropriate well-considered methodology,

which leads to learning AND further application of environmental knowledge, skills, competences in practice.

# General conclusions

Besides, there are study course concepts, where their authors should consider further improvements regarding the content, learning outcomes (knowledge, skills, competences), methodology and control forms providing good quality of study course implementation.

The use of current Literature sources, well-considered measures regarding content development, elaboration of appropriate methodology and conformity between all elements of study course concepts are the key issues for further development.

# General conclusions

ECOBRU project partners/universities hold diverse expertise in the course development and can create a joint platform for the successful experience and success story exchange.

The expected and well planned mobility visits are supposed to and can solve a major part of the identified course development problems.

Thank You for attention!

*I wish to create comprehensive and successful study courses  
in ECOBRU project!*