International Conference

DOCTORAL STUDY PROGRAM "ENVIRONMENTAL PROTECTION"

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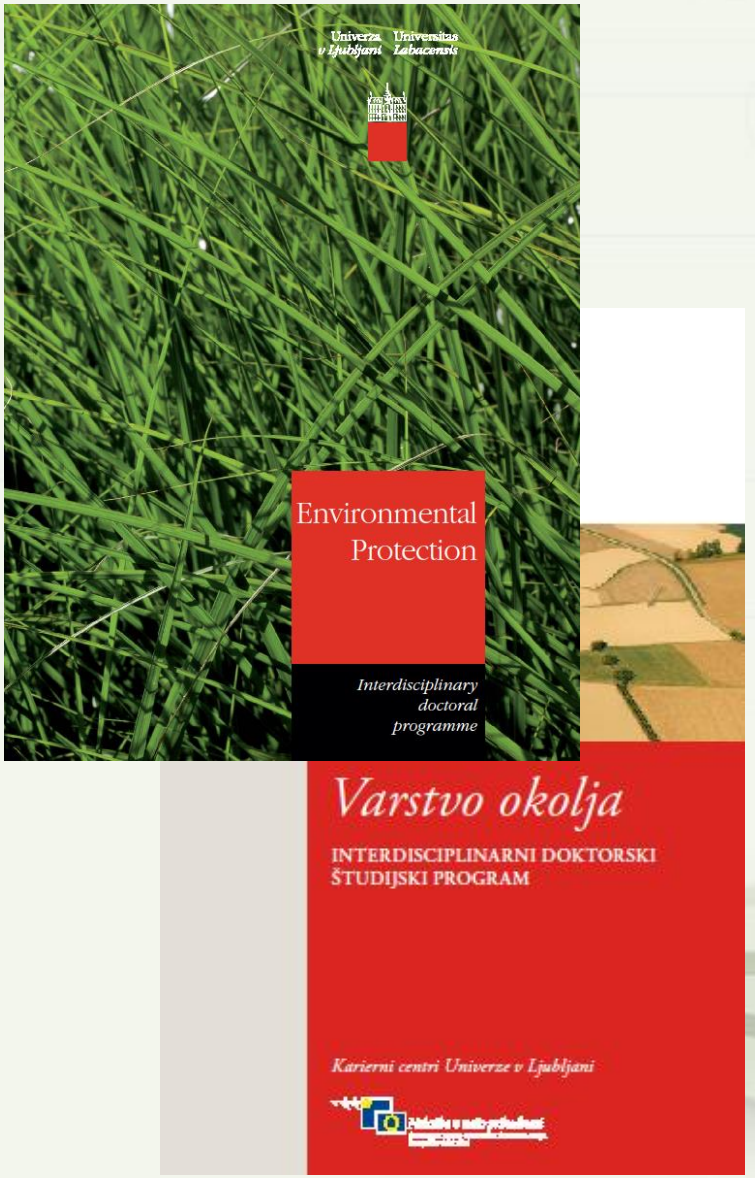
Slavonski Brod, 4-5th of December 2014

Introduction

In the year 2009 started at the University of Ljubljana interdisciplinary doctoral study program "Environmental Protection".

The program links together experts from various faculties and departments with the common interest of protecting the environment.

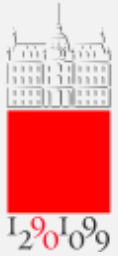
As to the content, the program has been harmonized with similar programs of other universities in particular in the EU and in the USA.



Faculties - partners

- Biotechnical Faculty
- Faculty of Economics
- Faculty of Social Sciences
- Faculty of Civil Engineering and Geodesy
- Faculty of Chemistry and Chemical Technology
- Faculty of Mathematics and Physics
- Faculty of Maritime Studies and Transport
- Faculty of Mechanical Engineering
- Faculty of Arts
- Faculty of Medicine
- Faculty of Natural Sciences and Engineering
- Faculty of Law
- Veterinary Faculty

Univerza *v Ljubljani*
Universitas *Labacensis*



The program

Interdisciplinary doctoral program **"Environmental protection"** is evaluated according to the European Credit Transfer System (ECTS), thus allowing students and lecturers to participate in international exchange schemes in the countries where ECTS or some other comparable system is implemented.

The doctoral program results in the degree of **"Doctor of Science"** including five different study orientations:

Natural sciences,
Technical sciences,
Biotechnical sciences,
Medicine, and
Social sciences and humanities.

The program is comparable with other similar programmes of foreign universities.

The program

The interdisciplinary doctoral program ***"Environmental protection"*** *consists of:*

methodological course,
basic (core) courses, and
elective courses.

Content and structure of the program (by year)

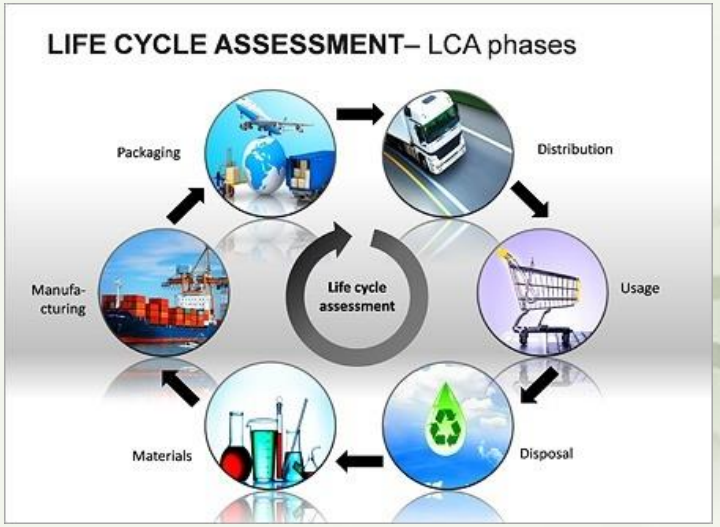
Year 1	Credits	Year 2	Credits	Year 3	Credits
Obligatory methodological Course	10	Elective Course	10	IRW	55
Core Courses	20	Doctoral seminar with presentation of the doctoral dissertation topic	5	Doctoral seminar with presentation of the doctoral dissertation prior to the public defence and the public defence	5
Elective Course	10	IRW	45		
IRW	20				

***IRW = Individual Research Work**

IDP ”Environmental protection” and LCA

In the frame of the program content is between the study topics presented and discussed in detail life cycle assessment (LCA) method, especially its advantages and disadvantages, and through the seminar works and individual student work application of LCA.

The students can find the base knowledge about Life Cycle Assessment in the elective course Designing Environmentally-Friendly Products and Technologies.



IDP ”Environmental protection” and LCA

Case studies and applications of LCA give them 4 elective courses:

Information Approaches in Science and Technology,

Recycling of Metal Materials,

Renewable Energy Sources, and

Designing Environmentally-Friendly Products and Technologies.

Environmental-energetic analysis of the process

Environmental-energetic analyisis of the process which is the base for Life Cycle Assessment (LCA) is the same for the bank, production organisation, …., and steelwork.

Case Study 1: LCA in steelwork

We analysed potential application of LCA for the Slovenian steel producer ACRONI d.o.o., the biggest steel producer in Slovenia.

In years 2012 and 2014 heavy plates of two typical stainless steel grades 304 and 316, and of steel PROTAC 500 from ACRONI production program were analysed during two pilot student projects.

For the projects has been used the standard software for LCA analysis GaBi.

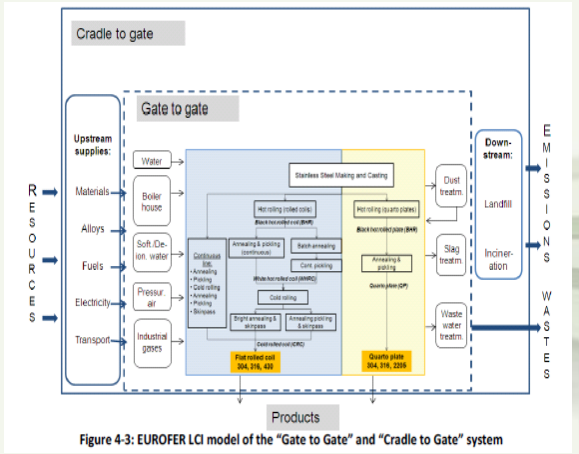


Figure 4-3: EUROFER LCI model of the "Gate to Gate" and "Cradle to Gate" system

Case Study 2: LCA in banking

In the study was used the LCA method to identify the sources of the environmental impact of a part of one of the biggest Central and Eastern European banks.

BANK PRODUCTS


SOCIETY OF ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY

CERTIFICATE OF ATTENDANCE

We confirm that

Borut Kosec

(NTF, UNI-LJ, Slovenia)

attended the SETAC Europe 25th LCA Case Study Symposium in Novi Sad, Serbia, 24 – 26 November 2014

And presented a Poster presentation

Titled

"Implementation of LCA in banking sector"

In Session: Education on promoting eco-innovation and sustainability (P)


Implementation of LCA in banking sector

Aims

What is LCA – in Banking

Define individual processes

Inflows

Outflows

Results

In the frame of study have been done:

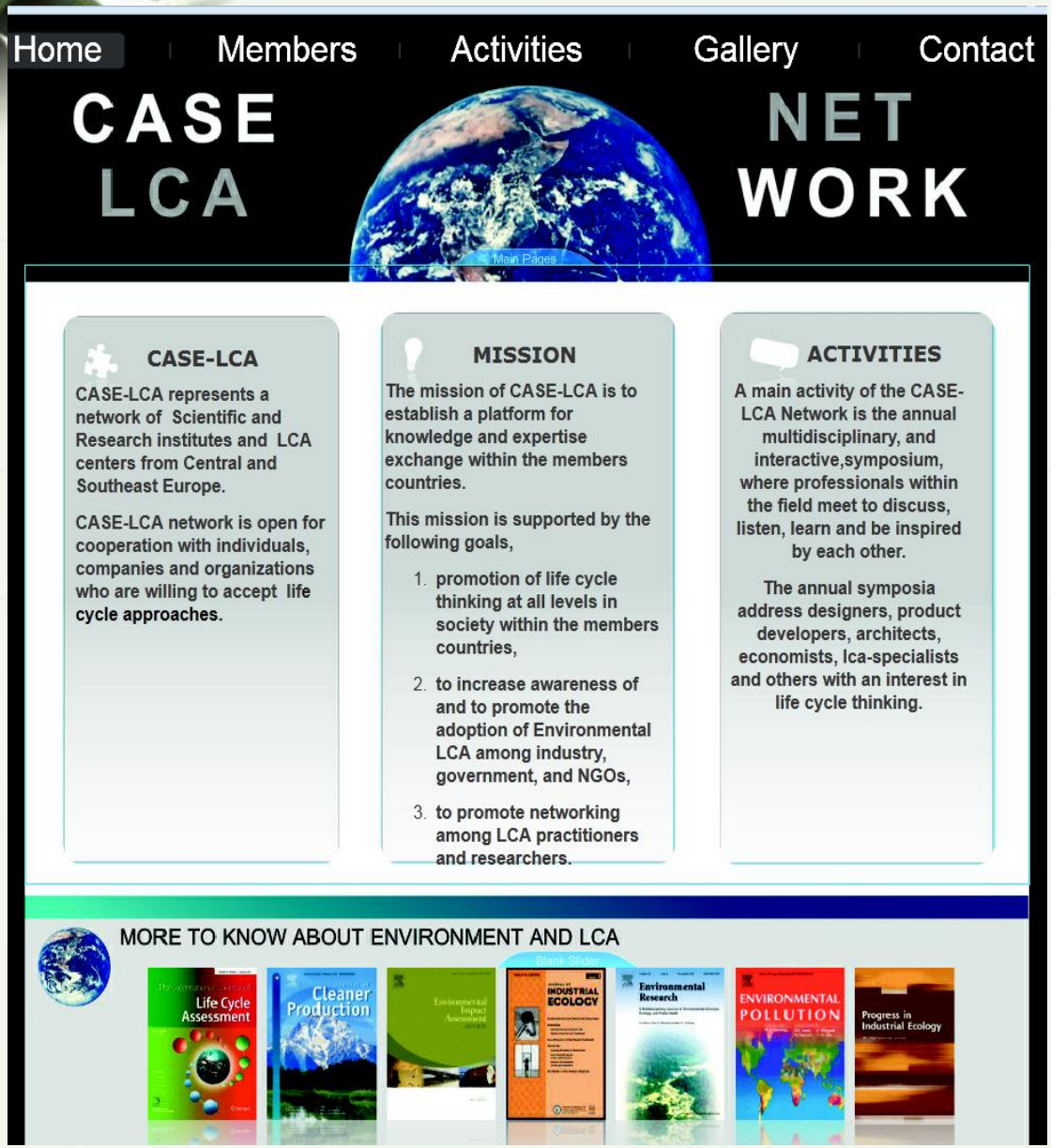
Conclusions

LCAcenter

Tempus project JEP_41156_2006

Training of Institutions in Modern Environmental Approaches and Technologies

CASE LCA Network



Partners

- University of Novi Sad
- Technical University of Vienna
- University of Poznaň
- University of Miškolc
- University of Ljubljana
- University of J. E. Purkyně Ústí nad Labem
- University of Josipa J. Strossmayera Osijek

SETAC EUROPE 20th LCA CASE STUDY SYMPOSIUM
LCA IN PROMOTING ECO-INNOVATION AND SUSTAINABILITY
– EDUCATION, RESEARCH AND APPLICATION
Novi Sad, Serbia 24-26 November 2014

LCAcenter

CONCLUSIONS

In the year 2009 started at the University of Ljubljana interdisciplinary doctoral study program ''Environmental Protection''.
The program links together experts from various faculties and departments with the common interest of protecting the environment.

In the frame of the program content is in the elective course Designing Environmentally-Friendly Products and Technologies presented and discussed in detail LCA method, especially its advantages and disadvantages.
Through the individual student work, seminar works and case studies is confirmed its applicability.

Thank you !