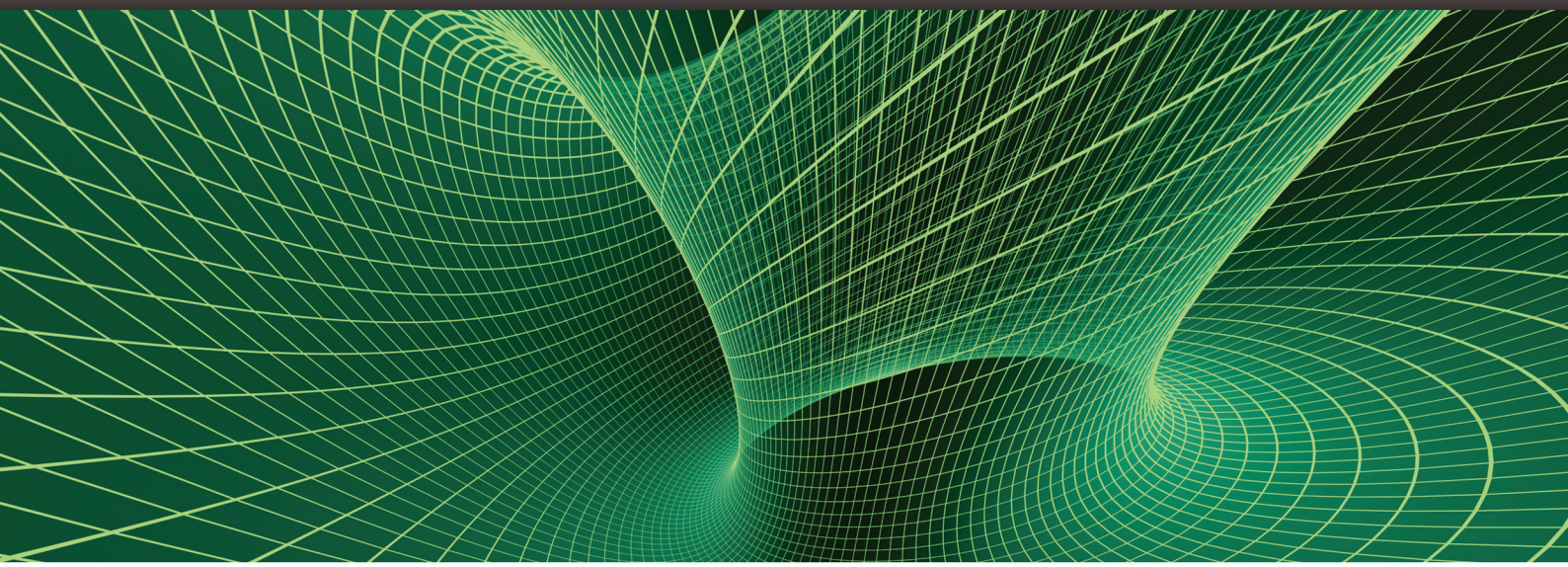

Tempus158989-Tempus-1-2009-1-BE-Tempus-JPHES

Creation of university-enterprise cooperation networks for education on sustainable technologies

# Dissemination Conference and Coordination Meeting Ohrid, MK

04 - 07 September 2012.

European Commission
TEMPUS

**Tempus158989-Tempus-1-2009-1-BE-Tempus-JPHES**
**Creation of university-enterprise cooperation networks for education on sustainable technologies**

**Dissemination conference**
**&**
**Coordination meeting**

**Ohrid, The former Yugoslav Republic of Macedonia**
**04th – 07thSeptember 2012.**

**PARTICIPANTS:**

1. Geert De Lepleer
2. Chris Van Keer
3. Wilhelm Hoeflinger
4. Gyula Vatai
5. Zoltan Zavargo
6. Milorad Cakic
7. Radoslav Grujic
8. Midhat Jasic
9. Emilija Fidancevska
10. Vineta Srebrenkoska
11. Damjan Tomanek

**AGENDA**

**Tuesday, 04thSeptember 2012.**

**Arrival of the participants**

**Accommodation**

20:00 Welcome dinner, Terrace Saraiste

**Wednesday, 05thSeptember 2012.**

**Villa St. Sofia**
9:30 – 11:30 Meeting of the participants
(Discussion for the sustainability of the project)

Strategic plan: The main task is to create a common strategic plan for sustainability that will be unique for all participating countries.

1. External outcomes: courses, contacts in industry, students;
2. Internal outcomes: courses offered to colleagues from universities that were involved in the project, how they can reach and find it, and how they can use outcomes from this project.

First outcome: 4 courses and 5 course books

Second outcome: Much more participants than originally planned in the Application, appr. 200 trainees passed the courses

Ideas:

- Course structure can be found on internet
- Contacts from industry that are educated can also participate as lectures in future courses
- Courses included in study plan and program at the basic academic studies at partner universities

- Find a publisher who will publish the course books so it can be offered on the book market
- Offer to governments that engineers from industry widen their knowledge by applying to courses (Chambers of commerce can initialize this)
- In some cases the potential trainees can choose chapters from course books that they would like to take
- Make an agreement on intellectual property of the course books and courses
- The direct link to industry should be the Chamber of commerce, that will directly offer the courses to industry staff (the whole Chamber or just some parts of it – for instance some sections)

External dissemination

1. The list of participating companies will be included in dissemination booklet
2. Courses mentioned at the TEMPUS web site, saying that they are offered at partner countries, as well as an introduction about the project; six links should lead to partner country covering the course; the project web site should contain the clear information about which partner country is covering which course
3. Try to contact the paper that covers topics from engineering sphere (like Engineering committee paper); make a list of journals where we could publish texts about the project; make a unique article that will be offered for publishing in all partner countries

Internal dissemination

1. Parts of courses introduced in everyday lectures
2. University senate confirmed course curricula
3. Student placement in partner industries involved in the project

12:00 Dissemination conference

**Koza Nostra**

13:30 Buffet lunch

**St. Naum**

16:00 Visiting St. Naum

**Restaurant**

20:00 Dinner

**Thursday, 06th September 2012.**

**Villa St. Sofia**

10:00 – 13:00 Working part

Intermediate report and evaluation:

- sustainability has to be pointed out more clearly

- cooperation agreement between WB partner universities has to be signed (plus the agreement about the intellectual property) – Novi Sad will prepare it on all four languages
- development of the strategic plan
- agreements with companies that were included in the project or new companies (if the faculty has already signed it, then just a copy)
- contract between the faculty and the local project coordinator about the approval of the courses

Dissemination conference evaluation

- One article has to written and published in English. Macedonian part will write it and publish it in Macedonian journal of chemistry and chemical engineering
- Leaflets have to be finished till the dissemination conference in Leskovac
- An article in "Prosvetnipregled" will be written by Novi Sad
- At the leaflets, the contact persons must be assigned for the academic year 2012/2013.; every academic year, contact persons must be named, and the names at the leaflets have to be changed
- New dates for next course will be put on the web site

Dissemination booklet

- The B version will be done
- Report should be send to all partners as soon as possible

Web site: Indicate the hidden part of the web site.

Reports from all Dissemination conferences have to be done.

In Tuzla meeting, change the part about the dissemination in Leskovac – only the WB countries will attend it.

Join the next two dissemination conferences for the daily allowances and send it to Ellen.

13:30 Lunch

**Free afternoon**

Sightseeing of the old town with the tour guide – depending on the wishes

**Terrace Saraiste**

20:00 Final dinner

**Friday, 07th September 2012.**

Departure of the participants

# Coordination meeting
# Ohrid
# September 2012.

# Report
# Working day
# 06. September 2012.

# Titles of the Courses

1. **Course 1**
   **Sustainable technologies in Food industry**
2. **Course 2**
   **Sustainable technologies in Pharmaceutical and cosmetic industry**
3. **Course 3**
   **Sustainable technologies and Chemical engineering**
4. **Course 4**
   **Sustainable technologies and Materials engineering**

# Contents of the Courses

1. **Course 1: Sustainable technologies in Food industry**
    1. Zero emission concept
    2. Environmental sustainability and industry
    3. Legislation
    4. Sustainable technologies
    5. Renewable energy resources
    6. Energy efficiency of the technology processes
    7. Sustainability in the food sector
    8. Food processing and generation of waste
    9. Zero emission in the food industry
    10. Hazardous substances from environment in food
    11. Pollution from food industry
    12. Wastewater treatment
    13. Case studies

2. **Course 2: Sustainable technologies in Pharmaceutical and cosmetic industry**
    1. Zero emission concept
    2. Environmental sustainability and industry
    3. Legislation
    4. Sustainable technologies
    5. Renewable energy resources
    6. Energy efficiency of the technology processes
    7. Pharmaceutical and cosmetic industry

3. **Course 3: Sustainable technologies and Chemical engineering**
    1. Zero emission concept
    2. Environmental sustainability and industry
    3. Legislation
    4. Sustainable technologies
    5. Renewable energy resources
    6. Energy efficiency of the technology processes
    7. Chemical engineering

4. **Course 4: Sustainable technologies and Materials engineering**
    1. Zero emission concept
    2. Environmental sustainability and industry
    3. Legislation
    4. Sustainable technologies
    5. Renewable energy resources
    6. Energy efficiency of the technology processes
    7. Materials engineering

# Titles of the Course books

1. **Book 1**
   **Sustainable technologies**
2. **Book 2**
   **Sustainable technologies in Food industry**
3. **Book 3**
   **Sustainable technologies in Pharmaceutical and cosmetic industry**
4. **Book 4**
   **Sustainable technologies and Chemical engineering**
5. **Book 5**
   **Materials engineering**

## Contents of the Certificates

**Certificate 1/1 EN**
**For lecturers**

University of Tuzla
Faculty of Technology Tuzla
&
Tempus 158989-Tempus-1-2009-1-BE-Tempus-JPHES
„Creation of university-enterprise cooperation networks
for education on sustainable technologies“

Issues

# CERTIFICATE

to

## Midhat Jašić

FOR LECTURING AT THE COURSE UNDER THE TITLE
''SUSTAINABLE TECHNOLOGIES'
TUZLA, APRIL - JUNE 2012.

Tuzla June 2012.

| | |
|---|---|
| Coordinator of the Project | Dean of the Faculty |
| Geert De Lepeler | Amra Odabašić |
| Co-coordinator | Local coordinator |
| Zoltan Zavargo | Midhat Jašić |

**Certificate 1/2 RS/BA/MK**
**For lecturers**

Univerzitet u Tuzli
Tehnološki fakultet Tuzla
&
Tempus 158989-Tempus-1-2009-1-BE-Tempus-JPHES
„Kreiranje mreže univerzitet-privreda za saradnju na obučavanja u oblasti održivih tehnologija“

dodeljuju

# CERTIFIKAT

## Midhatu Jašiću

ZA ODRŽANO PREDAVANJE NA KURSU
‘’Održive tehnologije’
TUZLA, APRIL - JUN 2012.

Tuzla June 2012.

| | |
|---|---|
| Koordinator Projekta | Dekan Fakulteta |
| Geert De Lepeler | Amra Odabašić |
| Ko-koordinator | Lokalni koordinator |
| Zoltan Zavargo | Midhat Jašić |

**Certificate 2/1 EN**
**For trainees**

University of Tuzla
Faculty of Technology Tuzla
&
Tempus 158989-Tempus-1-2009-1-BE-Tempus-JPHES
„Creation of university-enterprise cooperation networks
for education on sustainable technologies“

Issues

# CERTIFICATE

to

## Alma Pirić

FOR SUCCESSFULLY COMPLETENG THE COURSE:UNDER THE TITLE
‘’SUSTAINABLE TECHNOLOGIES‘’
FROM APRIL 7th TO MAY 5th, 2012,
THUS ACQUIRES 6 ECTS credits

Tuzla June 2012.

| | |
|---|---|
| Coordinator of the Project | Dean of the Faculty |
| Geert De Lepeler | Amra Odabašić |
| Co-coordinator | Local coordinator |
| Zoltan Zavargo | Midhat Jašić |

**Certificate 2/2 EN**
**For trainees**

**Content of the Course**

**Uvodni deo**

**+**

**Naslovi svih kurseva**

**Certificate 3/1 RS/BA/MK**
**For trainees**

Univerzitet u Tuzli
Tehnološki fakultet Tuzla
&
Tempus 158989-Tempus-1-2009-1-BE-Tempus-JPHES
„ Kreiranje mreže univerzitet-privreda za saradnju na obučavanja u oblasti održivih tehnologija “

dodeljuju

# CERTIFIKAT

kojim se potvrđuje da je kandidat

## Alma Pirić

USPJEŠNO ZAVRŠILA KURS POD NAZIVOM
“ODRŽIVE TEHNOLOGIJE’’
U PERIODU OD 07.04.2012. DO 05.05.2012,
ČIME STIČE 6 ECTS BODOVA

Tuzla Jun 2012.

| | |
|---|---|
| Koordinator Projekta | Dekan Fakulteta |
| Geert De Lepeler | Amra Odabašić |
| Ko-koordinator | Lokalni koordinator |
| Zoltan Zavargo | Midhat Jašić |

**Certificate 3/2 RS/BA/MK**
**For trainees**

# Sadržaj kursa

**Uvodni deo**

**+**

**Naslovi svih kurseva**

# ECTS
# Files

**COURSE**
**Sustainable technologies in Food Industry**

**COURSE EDUCATIONAL AIMS**
The educational aims of the course are to equipped trainees with knowledge, clear understanding and attitude on sustainability concept, sustainable technologies and sustainable food industry. The course is part of the lifelong learning programme. The audience is preferably staff from the industry who is involved in the sustainability process but graduate students are also welcome. The course starts with general knowledge, proceeds with sustainable technologies and finally ends with food industry. The aim is to get the ability to implement acquired knowledge in practice in order to establish sustainable industry.

**COURSE OUTCOMES**
At the end of the course trainees will be expected to have a general knowledge of sustainability, specific knowledge on sustainable technology and sustainability in food industry. The trainees will be expected to acquire ability to handle specific problems in their company concerning sustainability.

**COURSE CONTENTS**
The course covers the following topics:

1. Zero emission concept
2. Environmental sustainability and industry
3. Legislation
4. Sustainable technologies
5. Renewable energy resources
6. Energy efficiency of the technology processes
7. Sustainability in the food sector
8. Food processing and generation of waste
9. Zero emission in the food industry
10. Hazardous substances from environment in food
11. Pollution from food industry
12. Wastewater treatment
13. Case studies

**ECTS**
6

**COURSE TEACHING METHODS/COURSE ASSESSMENTS**
The pedagogical methodology will be based on EU's strategy principle of working together and learning from each other. This principle will be applied in creating the courses and in defining the pedagogical methodology. The principle of good practice exchange and Peer learning will also be adopted.

1 ECTS = 25 hours
6 ECTS x 25 hours = 150 hours

**Division**
**Between theoretical, practical classes, self-conducted learning and case studies**

| | | |
|---|---|---|
| Lectures | 30 | hours |
| Practice | 31 | hours |
| Case studies | 10 | hours |
| Reworking lectures & Self-conducted learning | 75 | hours |
| Exams | 4 | hours |
| **Total** | **150** | **hours** |

**1 hour Lecture = 2 hours** Reworking lectures & Self-conducted learning
**1 hour Case study = 1,5 hours** Reworking lectures & Self-conducted learning
1 hour Practice = 0 **hours** Reworking lectures & Self-conducted learning

| Activities | Weeks | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | |
| | Course contents | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 6 | 7 | 8,9 | 10,11 | 12 | 13 | 13 | | |
| | Trainees workload in hours | | | | | | | | | | | | | | All |
| Lectures | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | 30 |
| Practice | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | | | | 31 |
| Case studies | - | - | - | - | - | - | - | - | - | | 2 | 4 | 4 | | 10 |
| Reworking lectures & Self-conducted learning | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 | 6 | 6 | | 75 |
| Exams (covers previous two weeks course content) | - | | 1 | | | 1 | | | 1 | | | | | | 3 |
| Final exam | | | | | | | | | | | | | | 1 | 1 |
| **Total** | **9** | **12** | **13** | **12** | **12** | **13** | **12** | **12** | **13** | **12** | **9** | **10** | **10** | **1** | **150** |

# Dissemination booklet

## Contents and structure

### Version B

1st page
Basic information

2nd page
Acknowledgment

3rd page
Introduction

1. Mission and vision
2. Sustainable technologies and lifelong learning
   EU's experience
3. Sustainable technologies
   Review of knowledge of the staff from industry
4. University-enterprise cooperation networks for education on sustainable technologies
   4.1 Courses on sustainable technologies (Short content and ECTS files)
      Sustainable technologies
      Food industry
      Pharmaceutical and cosmetic industry
      Chemical engineering
      Mateial engineering
   4.2 Held courses and evaluations
   4.3 Network
5. Summary of the conducted activities
6. Dissemination activities
7. Sustainsability
8. Evaluation (Short)
   Internal
   External
   Industry (1 from each partner country: RS, BA, MK)